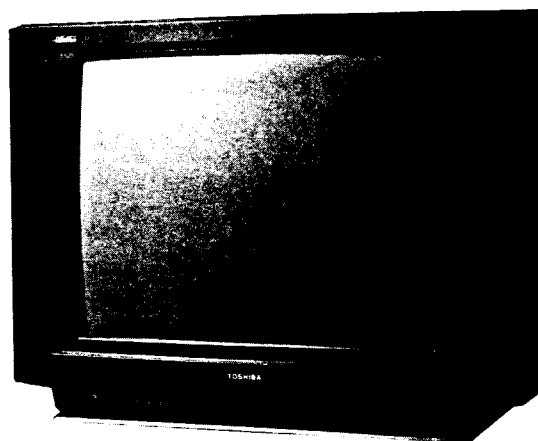


TOSHIBA

COLOUR TELEVISION

217D9D



SPECIFICATIONS

Input Power Rating :	122 watts, AC 220 volts, 50 Hz
Aerial Input Impedance :	75 ohm unbalanced type for VHF and UHF
Receiving Channels :	PAL B/G Standard, SECAM B/G Standard : VHF channels 2 to 4, 5 to 12 and S1 to S20 UHF channels 21 to 69 PAL I Standard : UHF channels 21 to 68 PAL, D/K, SECAM D/K Standard : VHF channels 1 to 12 UHF channels 21 to 69 PAL, SECAM 50 Hz/60 Hz (For Video Disk playback) 4.43NTSC (For VCR playback), 3.58/5.5 NTSC (For VCR playback)
Intermediate Frequencies :	Picture I-F carrier frequency 38.9 MHz Sound I-F carrier frequency B/G System 33.4 MHz I System 32.9 MHz D/K System 32.4 MHz
Picture Tube :	21 inches, A51EBV12X01, 510 mm (measured on diagonal of viewable picture area), 90° deflection
Sound Output :	10.0 watts (at 10% harmonic distortion) × 2
Speakers :	120 × 60 mm, 2 pcs 70 × 60 mm, 2 pcs
Aux. Terminals :	Headphone Jack, 21 pin socket, S-VIDEO/AUDIO socket, External speaker terminal, AUDIO/VIDEO input socket
Cabinet :	Table type
Dimensions :	Height 468 mm Width 610 mm Depth 484 mm
Weight :	21.5 kg

Specifications are subject to change without notice.

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 26.5 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 27.5 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation. For continued safety, replacement component should only be made after referring the Product Safety Notice below.

SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 25.0 kV. Extreme caution should be exercised when working on the receiver with the back removed.
Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.
When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap.
The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.
Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
6. Keep wires away from high temperature components.

PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

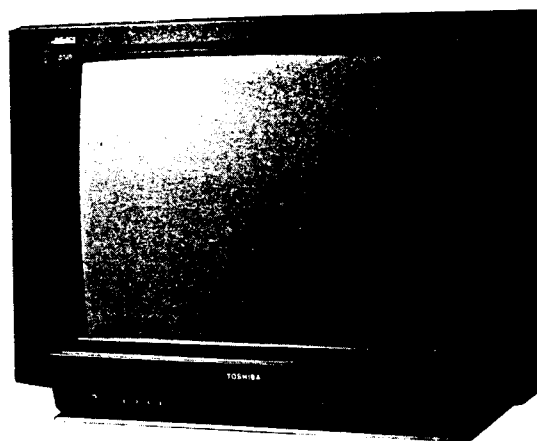
1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 26.5 kV at zero beam current (minimum brightness) operating at 220V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 27.5 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
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3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation.
For continued safety, replacement component should only be made after referring the Product Safety Notice below.

SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 25.0 kV. Extreme caution should be exercised when working on the receiver with the back removed.
Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment:-
When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap
The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.
Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
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PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

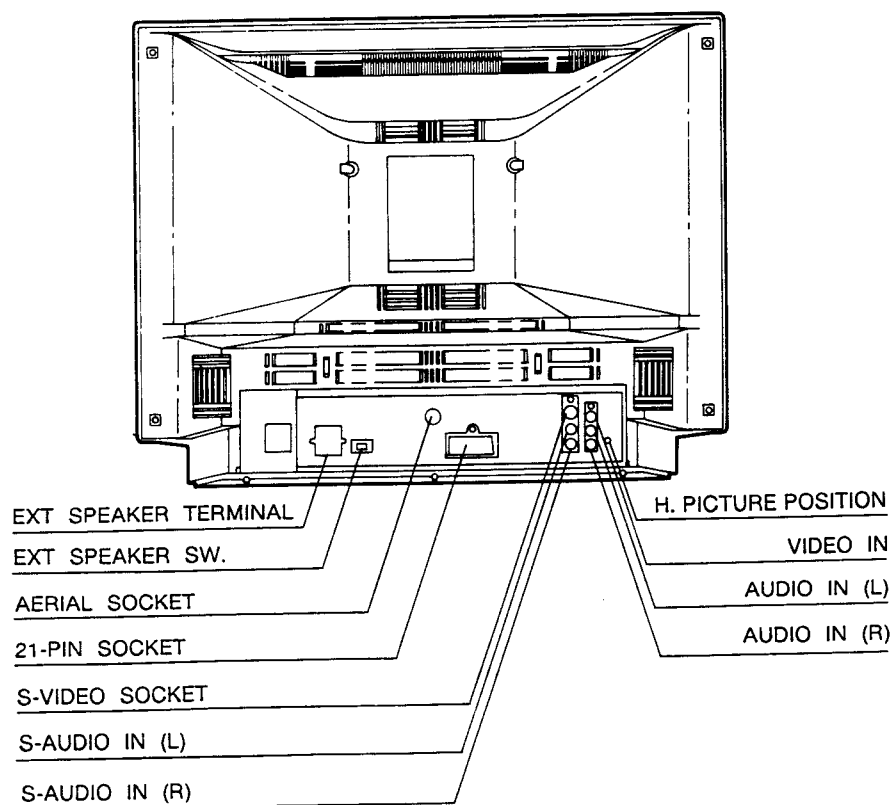
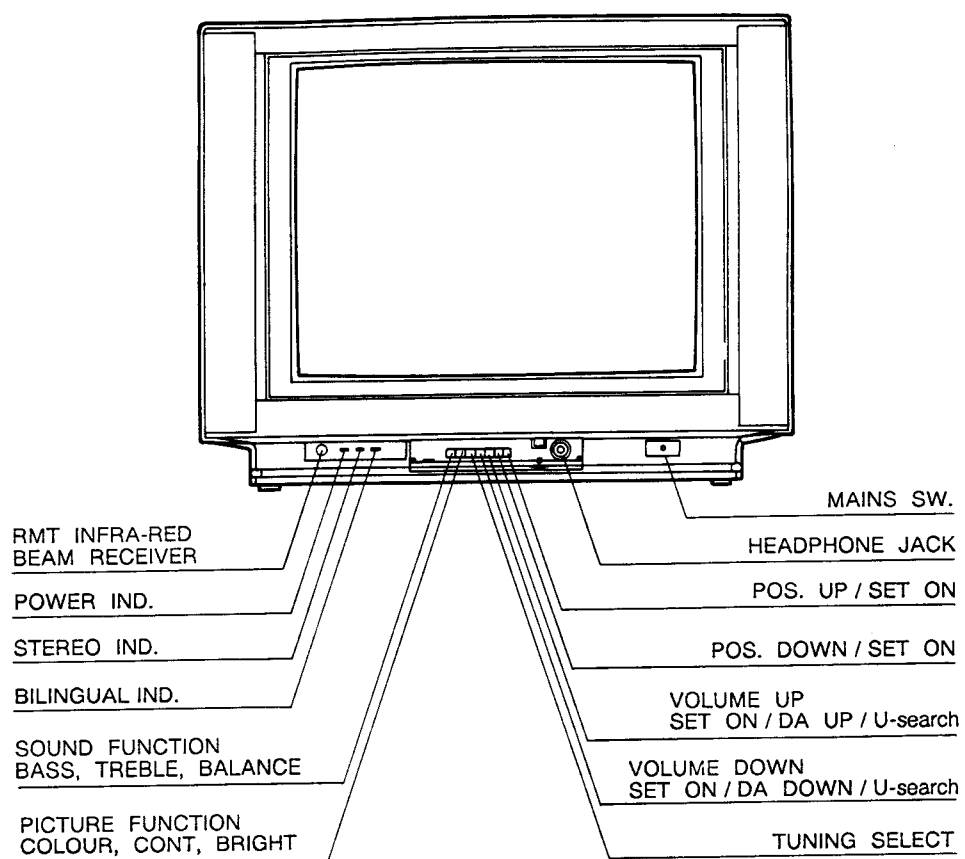


SPECIFICATIONS

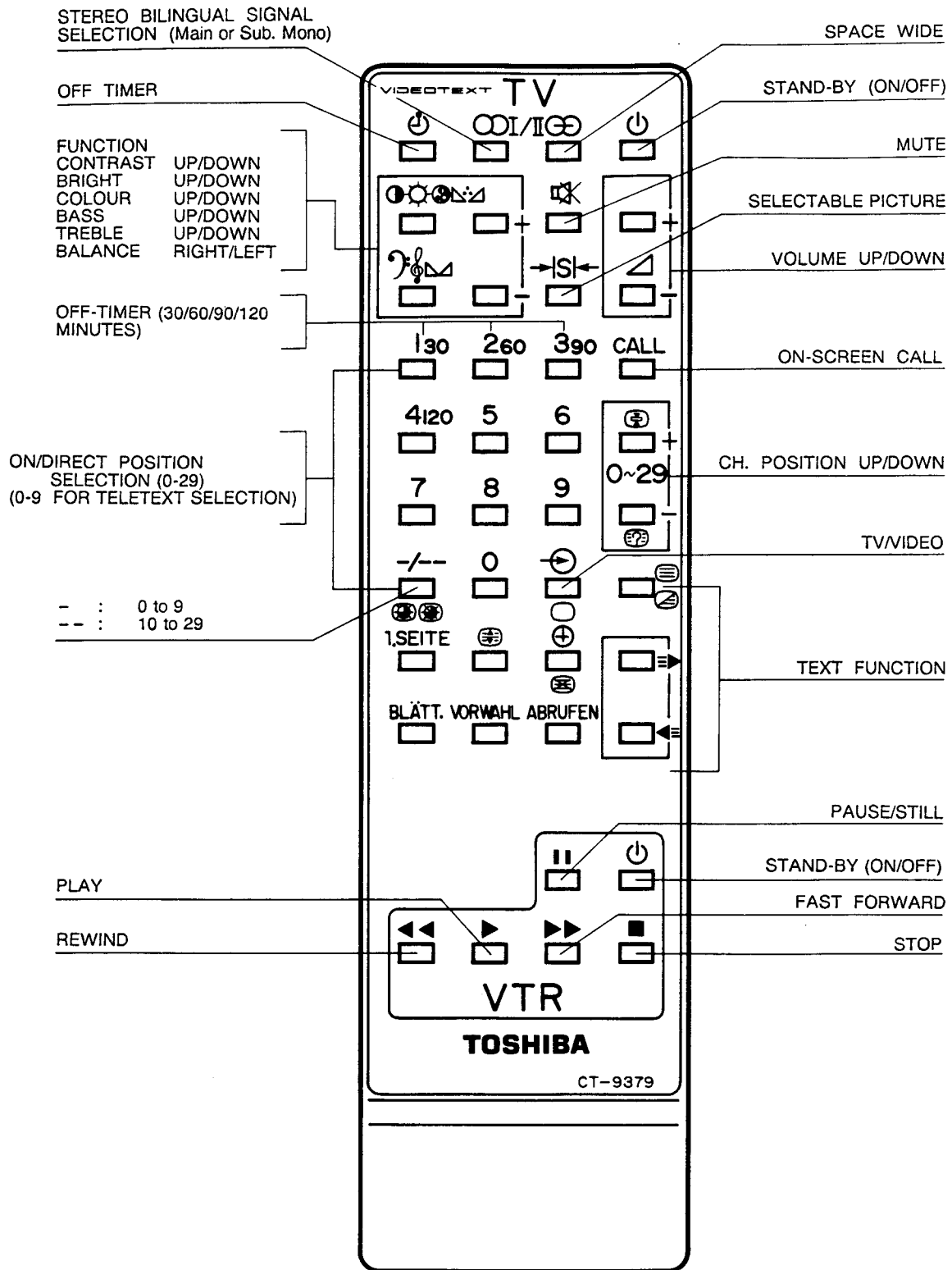
Input Power Rating :	122 watts, AC 220 volts, 50 Hz
Aerial Input Impedance :	75 ohm unbalanced type for VHF and UHF
Receiving Channels :	PAL B/G Standard, SECAM B/G Standard : VHF channels 2 to 4, 5 to 12 and S1 to S20 UHF channels 21 to 69 PAL I Standard : UHF channels 21 to 68 PAL, D/K, SECAM D/K Standard : VHF channels 1 to 12 UHF channels 21 to 69 PAL, SECAM 50 Hz/60 Hz (For Video Disk playback) 4.43NTSC (For VCR playback), 3.58/5.5 NTSC (For VCR playback)
Intermediate Frequencies :	Picture I-F carrier frequency 38.9 MHz Sound I-F carrier frequency B/G System 33.4 MHz I System 32.9 MHz D/K System 32.4 MHz
Picture Tube :	21 inches, A51EBV12X01, 510 mm (measured on diagonal of viewable picture area), 90° deflection
Sound Output :	10.0 watts (at 10% harmonic distortion) × 2
Speakers :	120 × 60 mm, 2 pcs 70 × 60 mm, 2 pcs
Aux. Terminals :	Headphone Jack, 21 pin socket, S-VIDEO/AUDIO socket, External speaker terminal, AUDIO/VIDEO input socket
Cabinet :	Table type
Dimensions :	Height 468 mm Width 610 mm Depth 484 mm
Weight :	21.5 kg

Specifications are subject to change without notice.

FRONT CONTROLS AND REAR VIEWS



REMOTE HAND HELD UNIT



WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATION

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 220 volts 50 Hz AC two pin power outlet. Turn the receiver ON. Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least one hour in order that the automatic degaussing circuit operates properly. Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source.

+ 120 VOLT POWER SUPPLY ADJUSTMENT (R851)

CAUTION: +B voltage closely relates to the high voltage. To prevent hazardous X-RAY RADIATION, the +B voltage must be properly adjusted to +120 volts.

1. Tune in an active channel. Adjust the BRIGHTNESS and CONTRAST Controls for normal picture.
2. Check that the AC power Line voltage is normal. (AC 220 volts, 50 Hz)
3. Connect a frequency counter to pin 3 and pin 4 (Ground) of Q807.
4. Adjust R852 for 20 kHz reading on the counter.
5. Remove the counter, and short R860 (connector side) to the ground.
6. Connect a digital voltmeter to both leads of C833.
7. Adjust R851 for 120V reading on the meter.
8. Remove the shorting on R860.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 27.5 kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 27.5 kV under any conditions.

HEIGHT ADJUSTMENT

1. Receive the WG PHILIPS pattern, and set the contrast and colour to minimum, and the brightness to centre.
2. Change the VERT POSITION SW (S301) so the round shape in the pattern is located in the centre of screen.
3. HEIGHT Control (R351) on MAIN Board changes the size of the picture or pattern, having an equal effect on the top and bottom. Make final adjustment to overscan the mask 2 cm at top and bottom.

HORIZONTAL CENTRE ADJUSTMENT

1. Receive the WG PHILIPS pattern.
2. Set the contrast and colour to minimum, and the brightness to centre.
3. Adjust H. CENTRE USER Control (R452) to the click (centre) position.
4. Adjust H. CENTRE SUB Control (R451) so the pattern centre can be located at the screen centre.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS.(T461) for well defined scanning lines in the centre area on the screen.

SIF DET (L651) ADJUSTMENT

1. Connect SIF generator to pin 2 of Q602 through 0.01 μ F capacitor.
2. Connect the oscilloscope to pin 9 of Q602.
3. Set up the SIF generator as described below.
Sound carrier frequency : 5.74 MHz
Modulation frequency : 1000 Hz
Frequency deviation : ± 15 kHz
Signal level : 80 dB μ (50 ohm load)
4. Adjust L651 for the maximum response of 1000 Hz det-out on scope.

BELL COIL (LM01) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the synchroscope to the terminal Pin 2 of LM01.
3. Adjust LM01 for the flat level of amplitude in each colour bar waveform on the scope. (See figure 1.)

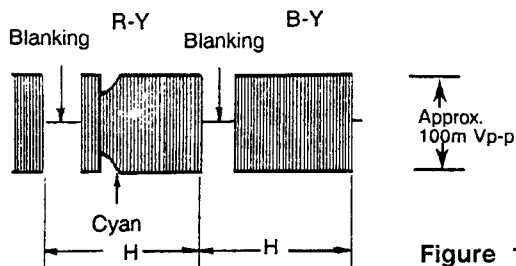


Figure 1.

IDENT COIL (LM04) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Connect the DC voltmeter (Digital Voltmeter) to the pin 23 of IC501.
3. Adjust LM04 for the maximum indication (approx. DC10V) on the meter.

B-Y, R-Y DEMOD COIL (LM02, LM03) ADJUSTMENT

1. Receive SECAM colour bar signal.
2. Set the COLOUR, BRIGHTNESS and CONTRAST Controls free.
3. Connect the synchroscope to the pin 62 of IC501.
4. Adjust LM02 so that the white level in picture part reaches to the vertical retrace line. (See figure 2.)
5. Then change the connection of synchroscope from the pin 62 to the pin 60 of IC501.
6. Adjust LM03 so that the white level in picture part reaches to the vertical retrace line. (See figure 3.)

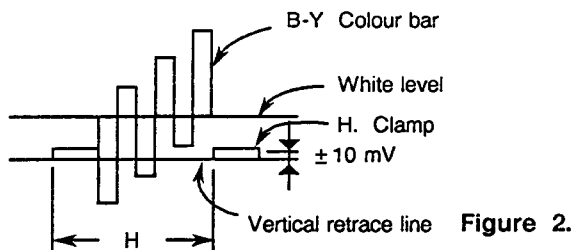


Figure 2.

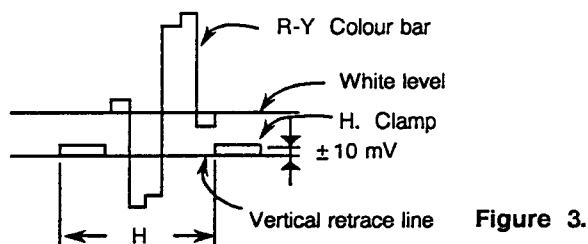


Figure 3.

PAL MATRIX ADJUSTMENT

1. Tune in the colour programme of the Philips pattern.
2. Set the COLOUR Control to obtain the proper colour.
3. If the PAL MATRIX adjustment is incorrect, the Venetian Blind would appear in the colour bars area. This case needs the adjustment.
4. At the first, adjust DL PHASE ADJ. Coil (L551) to minimize the Venetian Blind.
5. Next adjust 1H-DL ADJ. VR (R551) to minimize the Blind.
6. If the Venetian Blind still remains, adjust 1H-DL PHASE ADJ. Coil (L551) to minimize the Blind

7. Repeat the item 5 and 6 procedures, adjust the R551 and L551 until the Blind does not appear.

CRT GREY SCALE ADJUSTMENT

1. Tune in an active channel.
2. Turn the SCREEN Control (on T461) fully counterclockwise.
3. By rotating the RED, GREEN and BLUE CUT OFF Controls (R557, R558, R559) counterclockwise to the minimum.
4. Set the GREEN and BLUE DRIVE Controls (R252, R253) to the mid position.
5. Set the SERVICE SW. (S202) in the H. line position.
6. Short temporarily Terminal of RASTER CHIP on the CRT DRIVE Board.
7. Set the CONTRAST, COLOUR Controls to minimum and BRIGHTNESS Control to centre position.
8. Rotate the SCREEN Control gradually clockwise until the first line appears slightly on the screen. Set the SCREEN Control to this position.
9. Open the terminal of RASTER CHIP on the CRT DRIVE Board.
10. Adjust the CUT OFF Controls to obtain the slightly lighted horizontal lines in the same levels of three colours (RED, GREEN and BLUE). The lines may look like white if the CUT OFF Controls are adjusted properly.
11. Return the SERVICE SW. (S202) in the Receiving position.
12. Set the BRIGHTNESS Control to the maximum and COLOUR Control to the minimum.
13. Adjust the BLUE and GREEN DRIVE Controls (R252/R253) to obtain proper white-balanced picture in high light areas.
14. Set the BRIGHTNESS and CONTRAST Controls to obtain dark grey raster. Then check the white balance in low brightness. If the white balance is not proper, retouch the CUT OFF Controls and DRIVE Controls to obtain a good white balance in both low and high light areas.

SUB-BRIGHTNESS ADJUSTMENT

1. Tune in a colour programme.
2. Set the CONTRAST Control to the maximum and the BRIGHTNESS Control to the centre.
3. Set the COLOUR Control to the minimum.
4. Set the SUB-BRIGHT. Control (R255) to the centre and leave the receiver for five minutes in this state.
5. Watching the picture well, adjust the SUB-BRIGHT. Control in the position where the picture does not show evidence of blooming in high bright area and not appear too dark in low bright portion.
6. Check the proper picture variation by rotating the CONTRAST and BRIGHTNESS Controls to both extremes.
7. If the picture does not appear dark with the CONTRAST and BRIGHTNESS Controls turned to the minimum, or not appear bright with the controls turned to the maximum, adjust the SUB-BRIGHT. Control again for the acceptable picture.

PICTURE I-F TRAP ALIGNMENT

- GENERAL** Refer to figure 4 for the equipment connection.
- PRELIMINARY STEPS** 1. Turn the power switch of TV set off.
 2. Supply +12 volts to the IF Board.
 3. Supply +8 volts bias to terminal "TP-14 (pin 6 of Q101)" on the IF Board.
 4. Turn AGC DELAY Control (R151) fully clockwise.
- SWEEP/MARKER GENERATOR**..... Connect to the point ④ as shown in figure 4 on the Main Board.
- OSCILLOSCOPE**..... Connect through the detector (See figure 6.) to the emitter of Q102.
 Set the FTZ SW. (SN01) to the WG position.

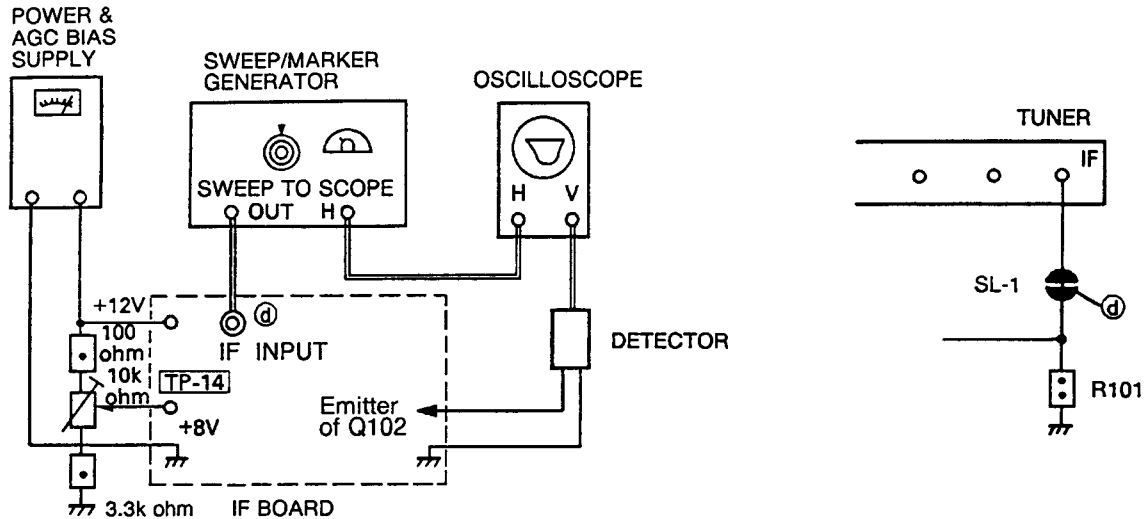


Figure 4.

STEP	SWEEP/MARKER GENERATOR	ADJUST	PROCEDURE
TRAP ALIGNMENT Control the sweep output for easy alignment. Set the IF makers for 40.4MHz (P + 1.5MHz) and 32.4MHz (P-6.5MHz).			
Trap coil TN01	40.4MHz Marker "ON"	TN01	Adjust TN01 so the 40.4MHz marker point is placed at bottom of response. (See figure 5.)
Trap coil TN02	32.4MHz Marker "ON"	TN02	Short the pin 13 of P102 to ground, and adjust TN02 so the 32.4MHz marker point is placed at bottom of response. (See figure 5.)



Figure 5. Trap Response

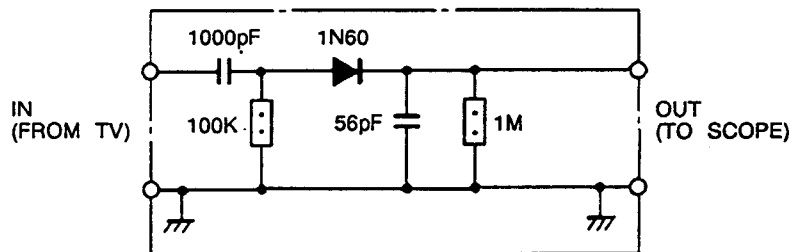


Figure 6. Detector Diagram

SIF & MPX ALIGNMENT

STEP	ADJUSTING PARTS	INPUT TERMINAL	OUTPUT TERMINAL	TEST SIGNAL	PROCEDURE
1	6.0 MHz SIF DET. COIL (LD05)	PIN 2 (QD03)	PIN 9 (QD03)	Input level: 80 to 100 dB μ f = 6.0 MHz fm = 1 kHz $\Delta f = \pm 15$ kHz	<ol style="list-style-type: none"> 1. Connect the signal to pin 2 of QD03 on MPX Board through a capacitor 0.01 μF. 2. Connect voltmeter to pin 9 of QD03. 3. Adjust LD05 for the maximum reading on voltmeter.
2	5.5 MHz SIF DET. COIL (CD51)	PIN 29 (QD03)	PIN 9 (QD03)	Input level: 80 to 100 dB μ f = 5.5 MHz fm = 1 kHz $\Delta f = \pm 15$ kHz	<ol style="list-style-type: none"> 1. Connect the signal to pin 2 of QD03 on MPX Board through a capacitor 0.01 μF. 2. Connect voltmeter to pin 9 of QD03. 3. Adjust CD51 for the maximum reading on voltmeter.
3	6.0 MHz SIF CONVERT (L662)	PIN 5 (Q661)	Intersection between CD10 and Z666	Input level: 80 to 100 dB μ f = 5.5 MHz fm = 1 kHz $\Delta f = \pm 15$ kHz	<ol style="list-style-type: none"> 1. Connect the signal to pin 5 of Q661 on MPX Board through a capacitor 0.01 μF. 2. Connect oscilloscope to the intersection of CD10 and Z666. 3. Adjust L662 for the maximum amplitude of 6.0 MHz.
4	54.7 kHz PILOT ADJ. (LG01)	PIN 21 (QG01)	Pin 19 (QG01)	Pilot Signal Input level: 100mVp-p f = 54.69 kHz	<ol style="list-style-type: none"> 1. Connect oscilloscope to pin 19 of QG01. 2. Adjust LG01 for the maximum amplitude of 54.69 kHz element.
5	STEREO SEPARATION (RG51)	Aerial	PIN 2 (QG01)	ON AIR SIGNAL S1: fm = 1 kHz $\Delta f = \pm 15$ kHz S2: fm = 1 kHz $\Delta f = \pm 30$ kHz LEFT CH.: No modulation INPUT LEVEL: 80 to 100dB μ	<ol style="list-style-type: none"> 1. Receive ON-AIR stereo signal. 2. Connect oscilloscope to pin 2 of QG01. 3. Adjust RG51 for the minimum amplitude of 1 kHz element.

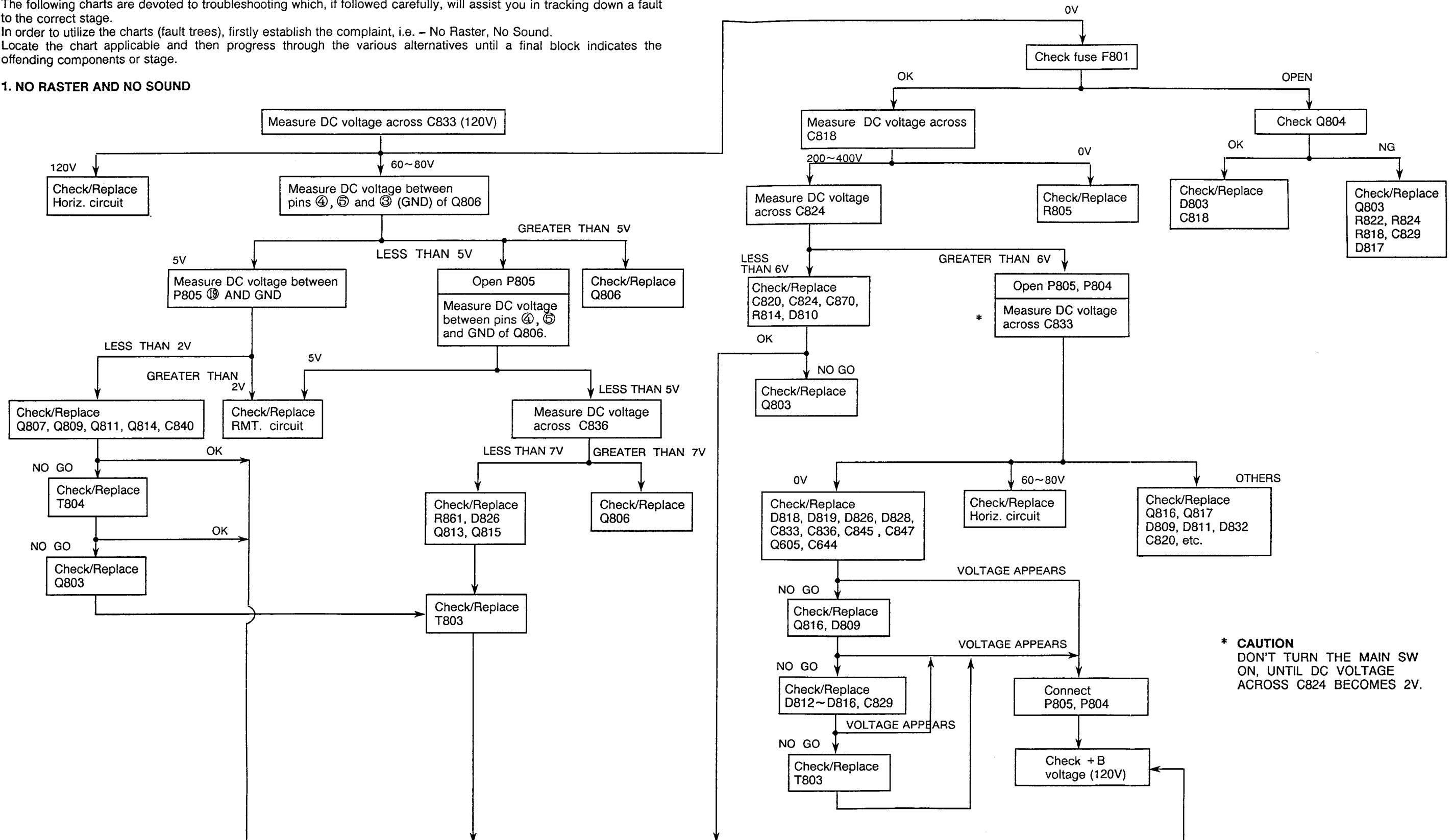
TROUBLESHOOTING CHARTS

The following charts are devoted to troubleshooting which, if followed carefully, will assist you in tracking down a fault to the correct stage.

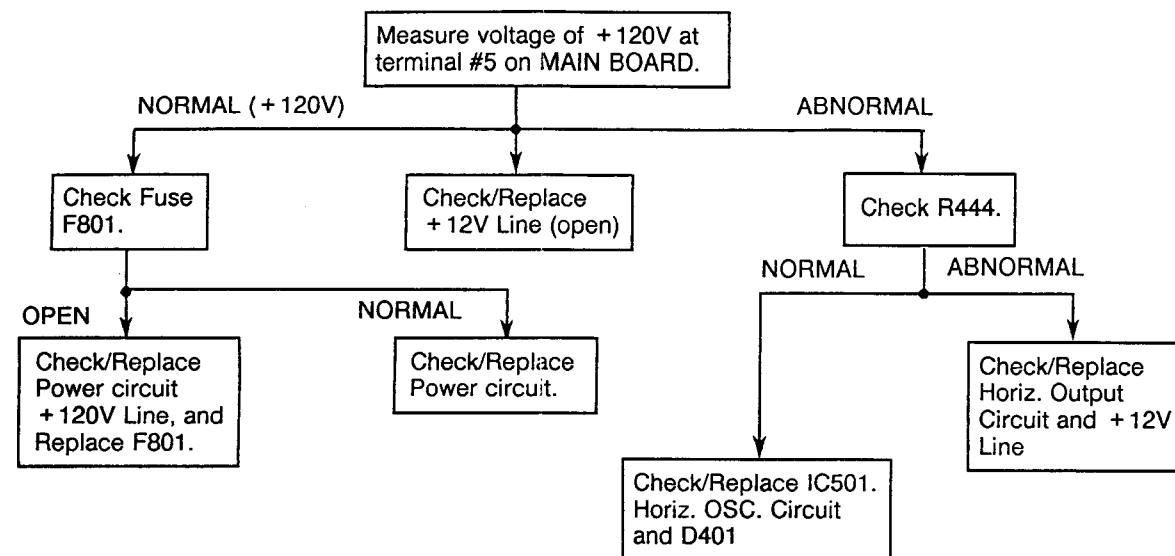
In order to utilize the charts (fault trees), firstly establish the complaint, i.e. – No Raster, No Sound.

Locate the chart applicable and then progress through the various alternatives until a final block indicates the offending components or stage.

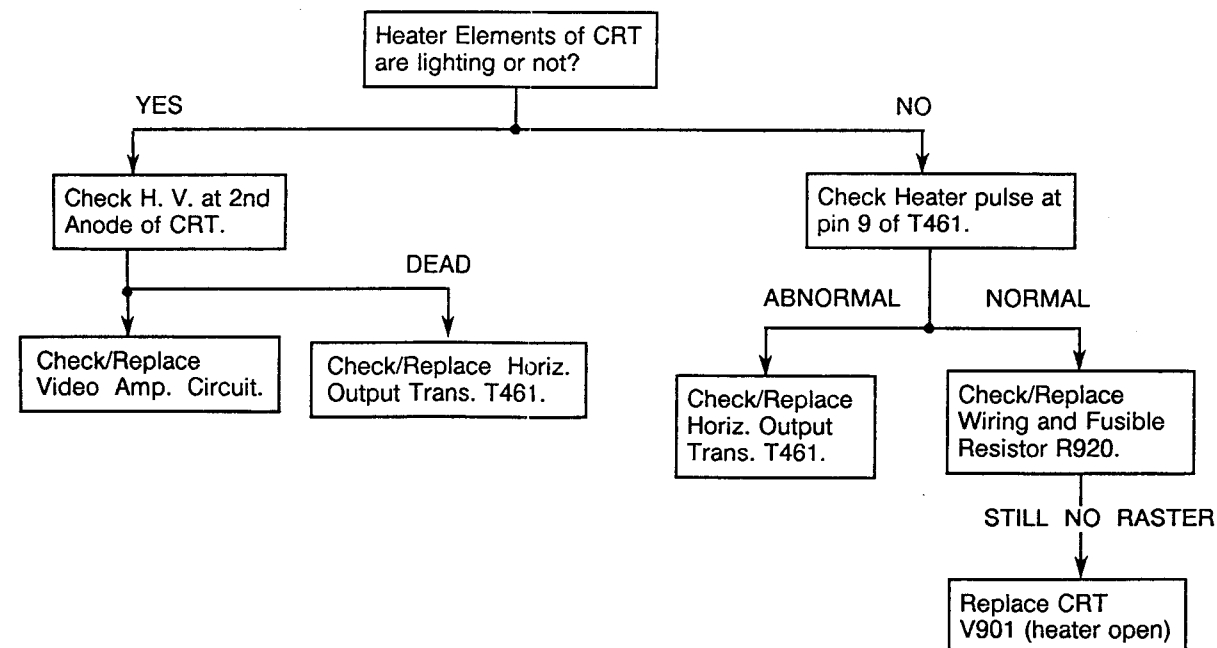
1. NO RASTER AND NO SOUND



2. NO RASTER (NOISE OR WEAK SOUND)

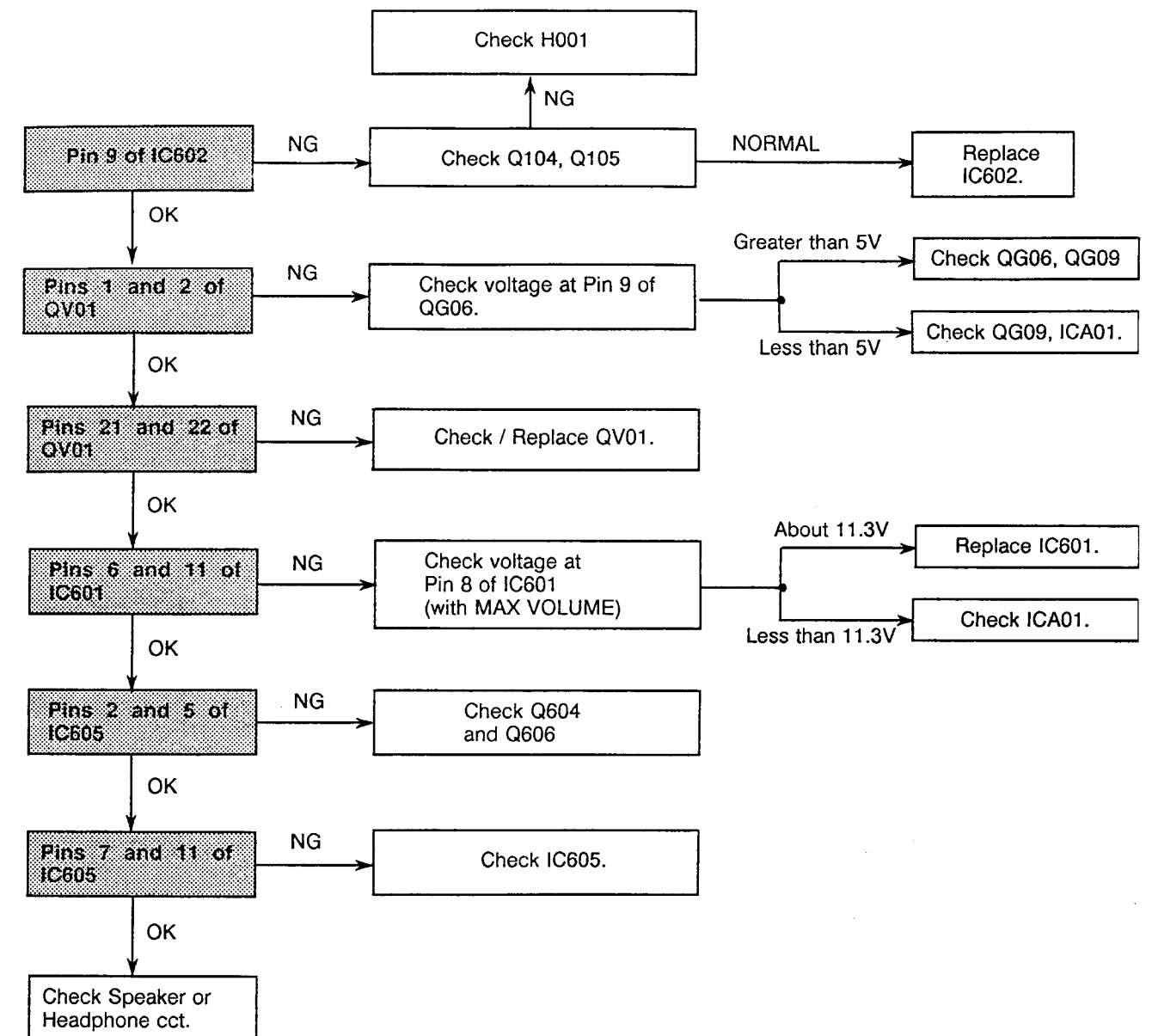


3. NO RASTER (SOUND OK)



4. NO SOUND

Note: Check the sound signal waveform for shaded area below.



5. NO PICTURE

Check video signal waveform for shaded area below.

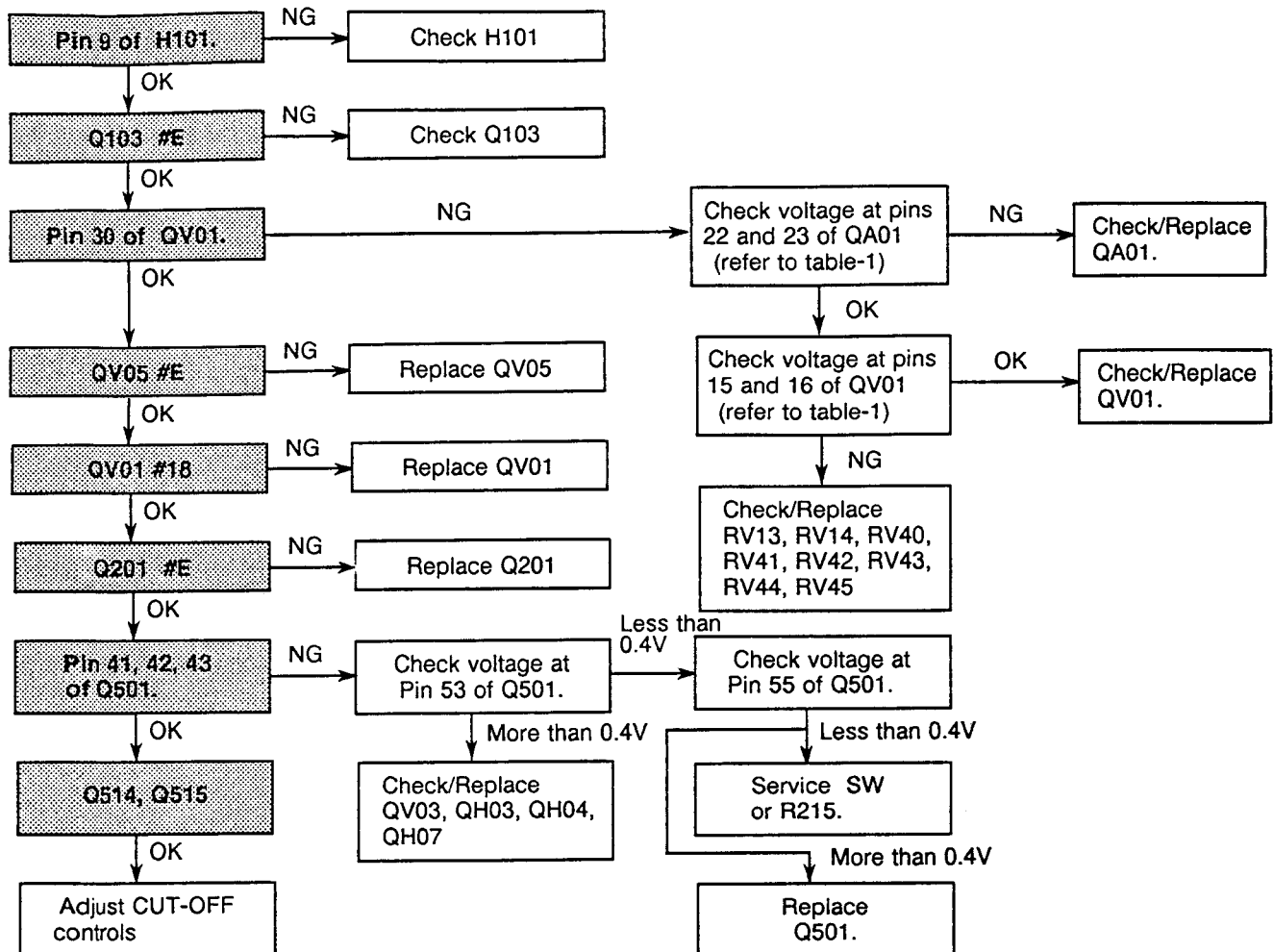


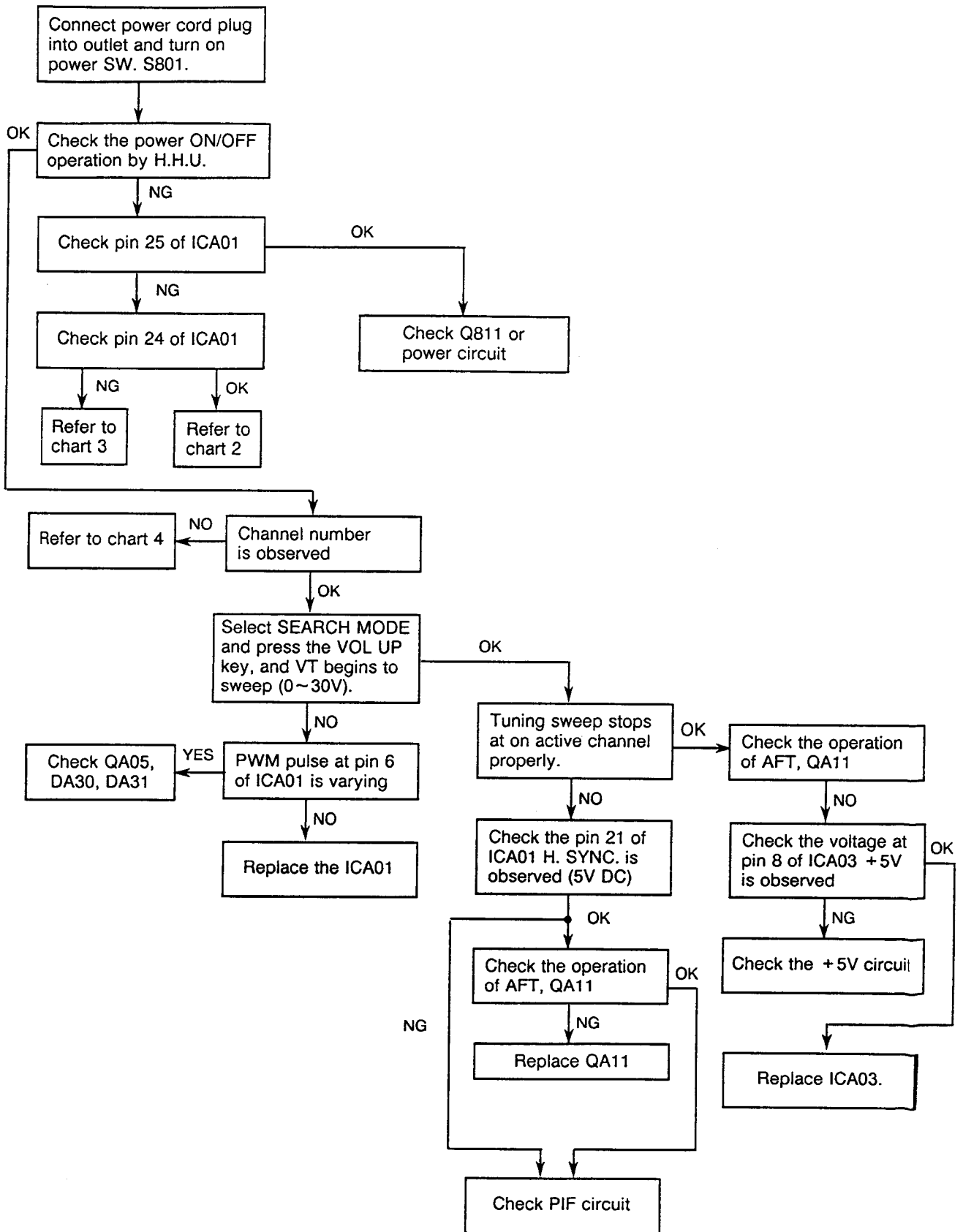
Table-1 (A/V Sw. logic)

MODE	QA01		QV01		Discription of (L) or (H)
	Pin 23	Pin 22	Pin 15	Pin 16	
TV-1	H	H	H	H(L)	When pin 8 of 21-PIN is High Level
VIDEO-1	H	L	H	L	
VIDEO-2	L	L	L	L	
VIDEO-3	L	H	L	H	

L : Less than 2.5V
H : More than 2.5V

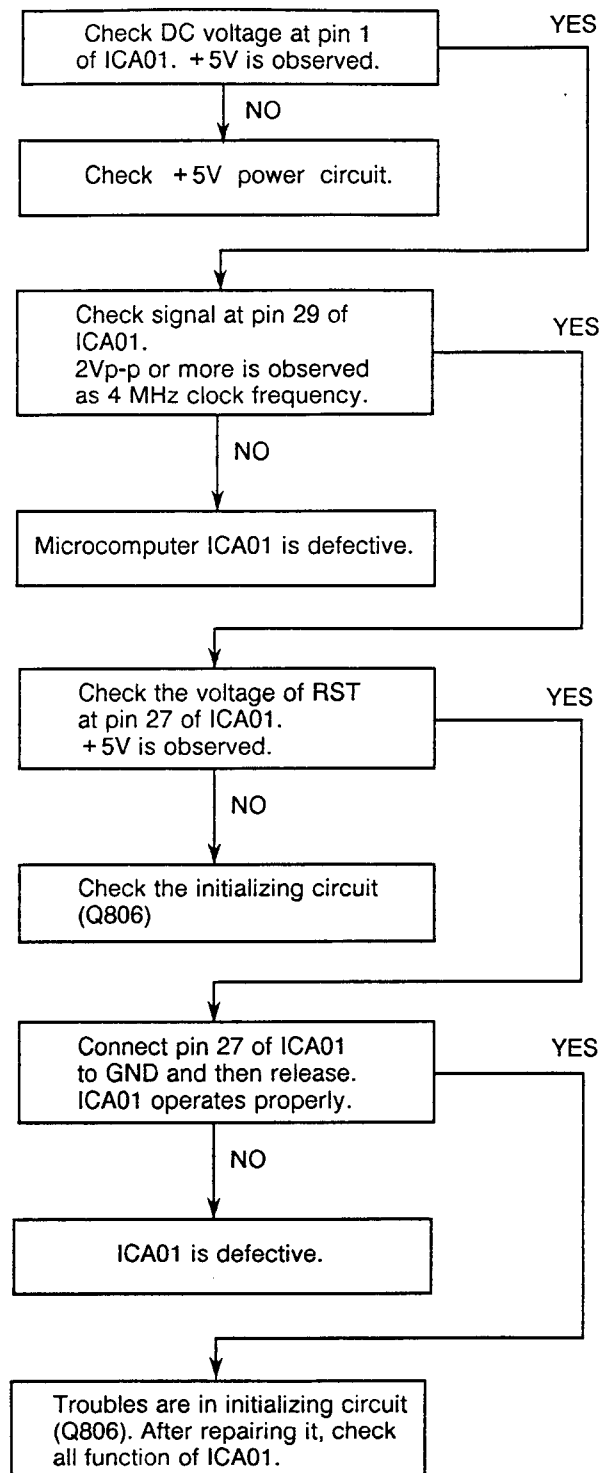
6. CHANNEL SELECTOR TROUBLE

[CHART 1]



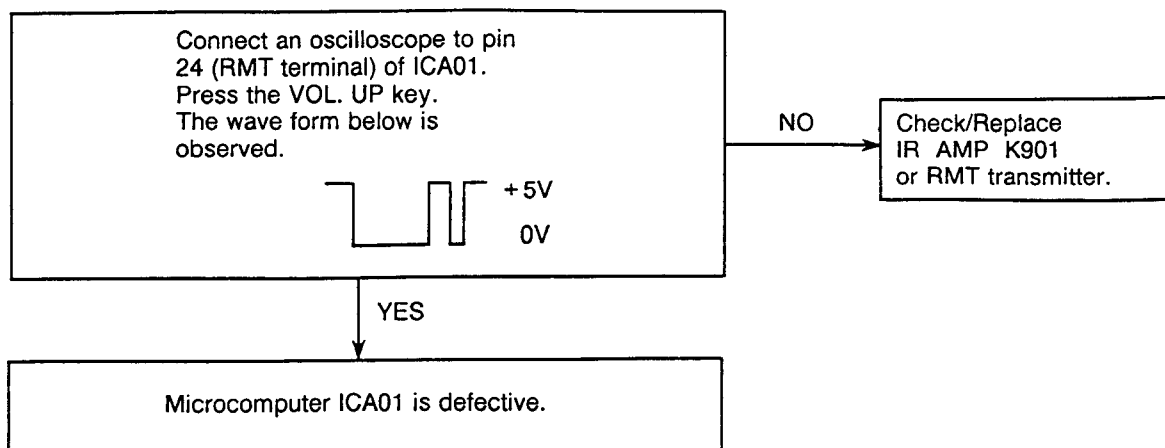
[CHART 2] Microcomputer (ICA01) Operation Check

Note: Before checking Microcomputer, check that control buttons and their connection work properly.

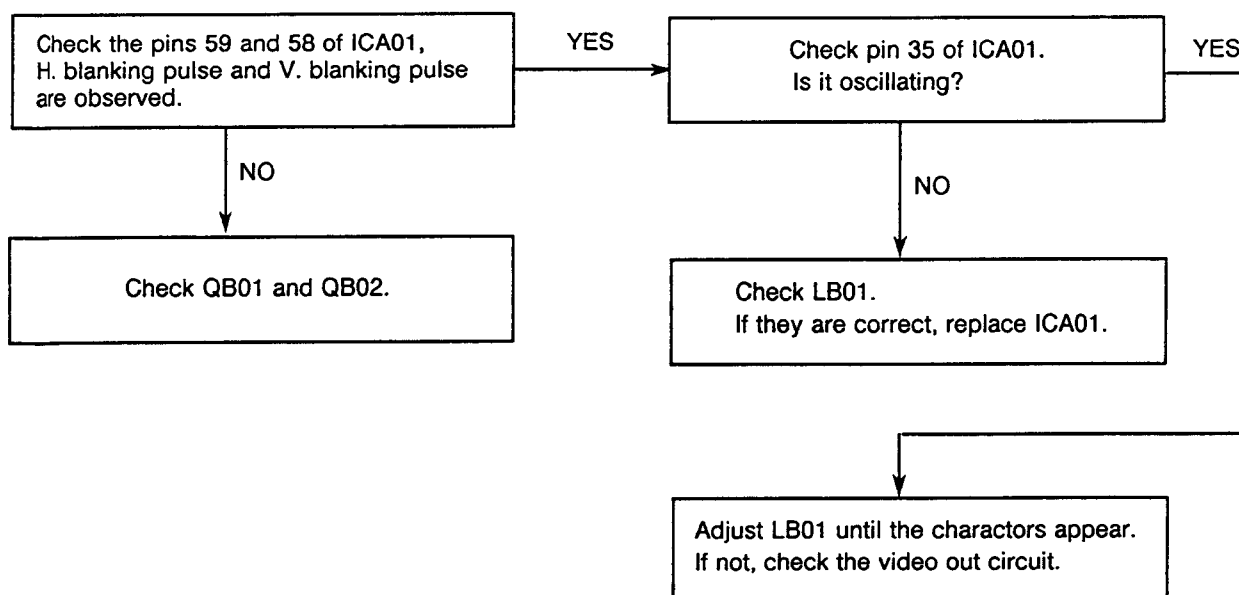


[CHART 3] Remote Control Operation Check

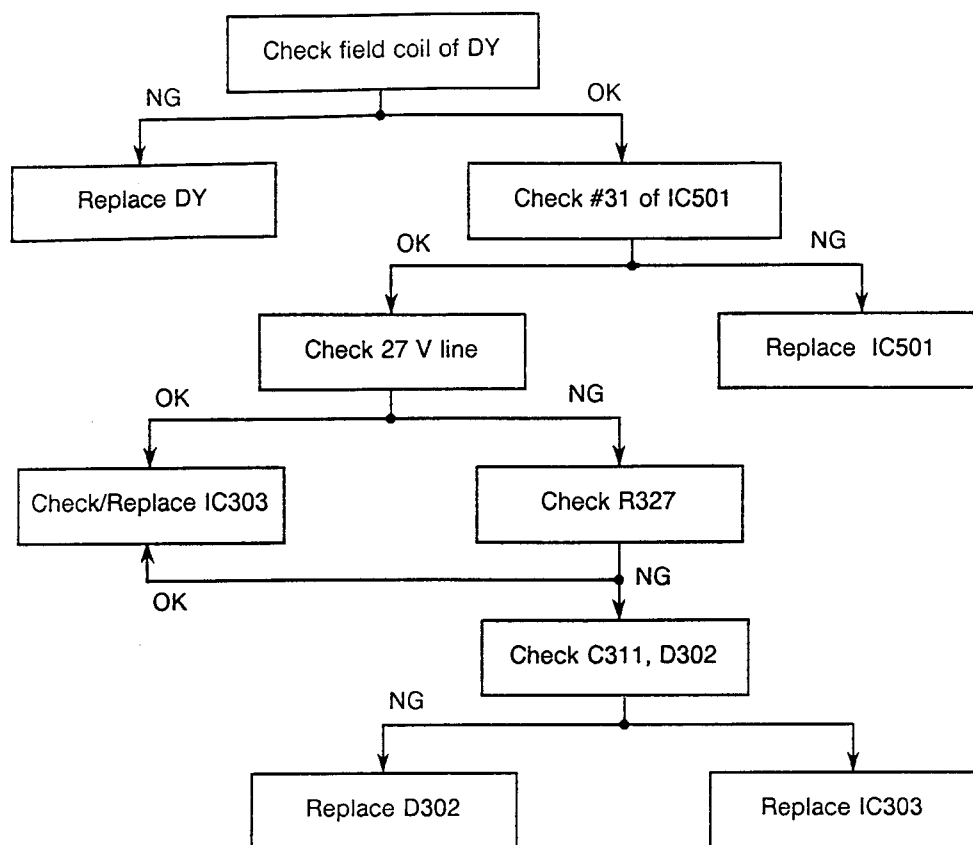
Note : Before checking RMT operation, check that key operation on TV set is proper.



[CHART 4] On Screen Display Operation Check



7. NO VERT. SCAN (ONE HORIZ. LINE RASTER)



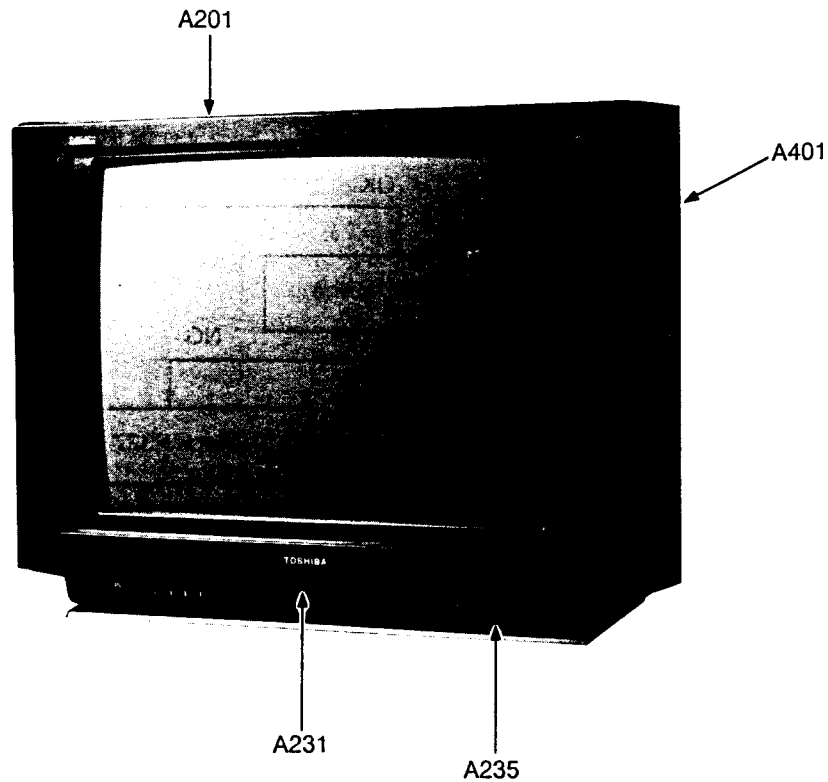
8. OUT OF VERT. SYNC. AND HORIZ. SYNC.

Check/Replace Sync Circuit pin 33 of IC501.

9. OUT OF HORIZ. SYNC.

Check/Replace Horiz. OSC Circuit and Horiz. AFC Circuit connected to Pins 36, 37 and 38 of IC501. Check/Replace IC501.

CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201S	23418356	Front Cover
A219	23874241	Cap for Knob
A231	23423064	Door
A235	23443331	Button, POWER
A238	70368125	Push Catch for Door
A401	23422943	Back Cover
A411	23998780	Label, Model No., B/C
A701	23523249	Carton
A702	23934480	Packing, Bottom
A703	23934479	Packing, Top
A710	23998781	Label, Model No., Carton
Y101	23994664	Owner's Manual

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE: The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.

ABBREVIATIONS:

Capacitors..... CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
Resistors..... CF : Carbon Film CC : Carbon Composition MF : Metal Film
 OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor
(All CD and PF capacitors are $\pm 5\%$, 50V and all resistors, $\pm 5\%$, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C101	24357201	CD, 200pF
C103	24212102	CD, 1000pF, $\pm 10\%$
C104	24232103	CD, 0.01 μ F, +80%, -20%
C105	24232103	CD, 0.01 μ F, +80%, -20%
C106	24232103	CD, 0.01 μ F, +80%, -20%
C107	24232103	CD, 0.01 μ F, +80%, -20%
C108	24232103	CD, 0.01 μ F, +80%, -20%
C109	24794471	EL, 470 μ F, 16V
C111	24636479	EL, 4.7 μ F, 50V
C112	24232103	CD, 0.01 μ F, +80%, -20%
C113	24633101	EL, 100 μ F, 16V
C114	24232103	CD, 0.01 μ F, +80%, -20%
C115	24530104	PF, 0.1 μ F, $\pm 10\%$, 63V
C116	24232103	CD, 0.01 μ F, +80%, -20%
C117	24212102	CD, 1000pF, $\pm 10\%$
C118	24636479	EL, 4.7 μ F, 50V
C201	24636100	EL, 10 μ F, 50V
C202	24795101	EL, 100 μ F, 25V
C203	24232103	CD, 0.01 μ F, +80%, -20%
C204	24797220	EL, 22 μ F, 50V
C205	24636478	EL, 0.47 μ F, 50V
C207	24633220	EL, 22 μ F, 16V
C208	24212102	CD, 1000pF, $\pm 10\%$
C209	24232103	CD, 0.01 μ F, +80%, -20%
C210	24636100	EL, 10 μ F, 50V
C240	24530474	PF, 0.47 μ F, $\pm 10\%$, 63V
C301	24085028	EL, 2.2 μ F, 25V, Non-Polar
C302	24212152	CD, 1500pF, $\pm 10\%$
C303	24617912	EL, 2.2 μ F, $\pm 10\%$, 50V
C307	24232103	CD, 0.01 μ F, +80%, -20%
C311	24796102	EL, 1000 μ F, 35V
C313	24796101	EL, 100 μ F, 35V
C315	24214221	CD, 220pF, $\pm 10\%$, 500V
C316	24795332	EL, 3300 μ F, 25V
C317	24617912	EL, 2.2 μ F, $\pm 10\%$, 50V
C318	24082049	PF, 0.047 μ F, 100V
C320	24082053	PF, 0.1 μ F, 100V
C321	24214391	CD, 390pF, 500V
C322	24530153	PF, 0.015 μ F, $\pm 10\%$, 63V
C330	24794471	EL, 470 μ F, 16V

Location No.	Part No.	Description
C360	24530224	PF, 0.22 μ F, $\pm 10\%$, 63V
C402	24353241	CD, 240pF
C403	24636339	EL, 3.3 μ F, 50V
C405	24593203	PF, 0.02 μ F
C406	24593203	PF, 0.02 μ F
C407	24593243	PF, 0.024 μ F
C408	24617929	EL, 18 μ F, $\pm 20\%$, 50V
C409	24232103	CD, 0.01 μ F, +80%, -20%
C410	24693272	PF, 2700pF, 100V
C412	24550182	PF, 1800pF, 63V
C413	24550182	PF, 1800pF, 63V
C416	24214271	CD, 270pF, $\pm 10\%$, 500V
△ C440	24095636	PF, 7200pF, $\pm 3\%$, 1.6kV
C441	24214221	CD, 220pF, $\pm 10\%$, 500V
C442	24095949	PF, 0.33 μ F, 200V
C443	24214221	CD, 220pF, $\pm 10\%$, 500V
C445	24095903	PF, 0.056 μ F, $\pm 10\%$, 250V
C446	24214102	CD, 1000pF, $\pm 10\%$, 500V
C447	24644479	EL, 4.7 μ F, 250V
C448	24795222	EL, 2200 μ F, 25V
C449	24794471	EL, 470 μ F, 16V
C451	24640908	EL, 33 μ F, $\pm 20\%$, 160V
△ C463	24212222	CD, 2200pF, $\pm 10\%$
C501	24797220	EL, 22 μ F, 50V
C502	24636100	EL, 10 μ F, 50V
C503	24436101	CD, 100pF
C504	24436101	CD, 100pF
C505	24550273	PF, 0.027 μ F, 63V
C506	24550273	PF, 0.027 μ F, 63V
C507	24530103	PF, 0.01 μ F, $\pm 10\%$, 63V
C508	24085028	EL, 2.2 μ F, 25V, Non-Polar
C509	24353330	CD, 33pF
C510	24232103	CD, 0.01 μ F, +80%, -20%
C511	24232103	CD, 0.01 μ F, +80%, -20%
C512	24353200	CD, 20pF
C515	24636220	EL, 22 μ F, 50V
C516	24530104	PF, 0.1 μ F, $\pm 10\%$, 63V
C517	24530104	PF, 0.1 μ F, $\pm 10\%$, 63V
C518	24232103	CD, 0.01 μ F, +80%, -20%
C519	24232103	CD, 0.01 μ F, +80%, -20%
C520	24636478	EL, 0.47 μ F, 50V

Location No.	Part No.	Description
C521	24530474	PF, 0.47 μ F, \pm 10%, 63V
C522	24538474	PF, 0.47 μ F
C523	24530474	PF, 0.47 μ F, \pm 10%, 63V
C524	24232103	CD, 0.01 μ F, +80%, -20%
C525	24436820	CD, 82pF
C526	24436820	CD, 82pF
C527	24436820	CD, 82pF
C530	24796220	EL, 22 μ F, 35V
C531	24633100	EL, 10 μ F, 16V
C532	24436820	CD, 82pF
C533	24436820	CD, 82pF
C534	24436820	CD, 82pF
C535	24636100	EL, 10 μ F, 50V
C536	24636478	EL, 0.47 μ F, 50V
C537	24794101	EL, 100 μ F, 16V
C540	24436391	CD, 390pF
C541	24436391	CD, 390pF
C542	24436391	CD, 390pF
C560	24212102	CD, 1000pF, +10%
C561	24232103	CD, 0.01 μ F, +80%, -20%
C601	24436470	CD, 47pF
C602	24436470	CD, 47pF
C603	24232103	CD, 0.01 μ F, +80%, -20%
C604	24232103	CD, 0.01 μ F, +80%, -20%
C605	24633470	EL, 47 μ F, 16V
C606	24232103	CD, 0.01 μ F, +80%, -20%
C607	24353150	CD, 15pF
C608	24355620	CD, 62pF
C609	24340220	CD, 22pF
C610	24436201	CD, 200pF
C613	24530122	PF, 1200pF, \pm 10%, 63V
C614	24633220	EL, 22 μ F, 16V
C615	24636479	EL, 4.7 μ F, 50V
C616	24636229	EL, 2.2 μ F, 50V
C617	24636479	EL, 4.7 μ F, 50V
C618	24636479	EL, 4.7 μ F, 50V
C619	24794470	EL, 47 μ F, 16V
C620	24530103	PF, 0.01 μ F, \pm 10%, 63V
C621	24550563	PF, 0.056 μ F, 63V
C622	24530103	PF, 0.01 μ F, \pm 10%, 63V
C623	24550563	PF, 0.056 μ F, 63V
C624	24633220	EL, 22 μ F, 16V
C625	24794470	EL, 47 μ F, 16V
C626	24636479	EL, 4.7 μ F, 50V
C627	24636479	EL, 4.7 μ F, 50V
C628	24530102	PF, 1000pF, \pm 10%, 63V
C629	24530102	PF, 1000pF, \pm 10%, 63V
C633	24530184	PF, 0.18 μ F, \pm 10%, 63V
C634	24530562	PF, 5600pF, \pm 10%, 63V
C635	24763221	EL, 220 μ F, 16V
C636	24636478	EL, 0.47 μ F, 50V
C637	24795101	EL, 100 μ F, 25V
C638	24636478	EL, 0.47 μ F, 50V
C640	24530184	PF, 0.18 μ F, \pm 10%, 63V
C641	24530562	PF, 5600pF, \pm 10%, 63V
C642	24763221	EL, 220 μ F, 16V
C643	24530104	PF, 0.1 μ F, \pm 10%, 63V
C644	24797471	EL, 470 μ F, 50V
C645	24530104	PF, 0.1 μ F, \pm 10%, 63V
C646	24795102	EL, 1000 μ F, 25V
C647	24795102	EL, 1000 μ F, 25V
C648	24232103	CD, 0.01 μ F, +80%, -20%
C649	24232103	CD, 0.01 μ F, +80%, -20%
C663	24436470	CD, 47pF

Location No.	Part No.	Description
C664	24436470	CD, 47pF
C665	24232103	CD, 0.01 μ F, +80%, -20%
C666	24353680	CD, 68pF
C667	24436471	CD, 470pF
C668	24436471	CD, 470pF
C669	24232103	CD, 0.01 μ F, +80%, -20%
C672	24232103	CD, 0.01 μ F, +80%, -20%
C673	24232103	CD, 0.01 μ F, +80%, -20%
C674	24797470	EL, 47 μ F, 50V
C675	24232103	CD, 0.01 μ F, +80%, -20%
C680	24636100	EL, 10 μ F, 50V
C681	24636100	EL, 10 μ F, 50V
△ C801	24098999	PF, 0.1 μ F, \pm 20%, AC250V
△ C802	24094655	CD, 1000pF, \pm 20%, AC400V
△ C803	24094655	CD, 1000pF, \pm 20%, AC400V
△ C804	24094655	CD, 1000pF, \pm 20%, AC400V
△ C805	24094655	CD, 1000pF, \pm 20%, AC400V
△ C806	24098999	PF, 0.1 μ F, \pm 20%, AC250V
C811	24092281	CD, 4700pF, \pm 20%, AC250V
C812	24092281	CD, 4700pF, \pm 20%, AC250V
C813	24092281	CD, 4700pF, \pm 20%, AC250V
C814	24092281	CD, 4700pF, \pm 20%, AC250V
C817	24538474	PF, 0.47 μ F
C818	24086915	EL, 270 μ F, \pm 20%, 450V
C820	24636100	EL, 10 μ F, 50V
C822	24092030	CD, 680pF, \pm 10%, 2kV
C823	24636100	EL, 10 μ F, 50V
C824	24797221	EL, 220 μ F, 50V
C825	24212102	CD, 1000pF, \pm 10%
C826	24530104	PF, 0.1 μ F, \pm 10%, 63V
C827	24598821	PF, 820pF
C828	24636479	EL, 4.7 μ F, 50V
C829	24757470	EL, 47 μ F, 100V
C830	24095931	PF, 2200pF, 1600V
C831	24633100	EL, 10 μ F, 16V
C832	24442181	CD, 180pF, \pm 10%, 2kV
C833	24086953	EL, 220 μ F, \pm 20%, 160V
C834	24530104	PF, 0.1 μ F, \pm 10%, 63V
C835	24214221	CD, 220pF, \pm 10%, 500V
C836	24795222	EL, 2200 μ F, 25V
C837	24436561	CD, 560pF
C838	24598821	PF, 820pF
C839	24530474	PF, 0.47 μ F, \pm 10%, 63V
C840	24636100	EL, 10 μ F, 50V
C842	24794470	EL, 47 μ F, 16V
C843	24794470	EL, 47 μ F, 16V
C844	24214221	CD, 220pF, \pm 10%, 500V
C845	24796222	EL, 2200 μ F, 35V
C846	24214221	CD, 220pF, \pm 10%, 500V
C847	24797222	EL, 2200 μ F, 50V
C861	24092027	CD, 390pF, \pm 10%, 2KV
C862	24636229	EL, 2.2 μ F, 50V
C863	24214391	CD, 390pF, \pm 10%, 500V
C901	24640987	EL, 2.2 μ F, 350V
C902	24095981	PF, 2200pF, 1600V
CA01	24794470	EL, 47 μ F, 16V
CA02	24633100	EL, 10 μ F, 16V
CA03	24232103	CD, 0.01 μ F, +80%, -20%
CA04	24232103	CD, 0.01 μ F, +80%, -20%
CA05	24436300	CD, 30pF
CA06	24436300	CD, 30pF
CA07	24436101	CD, 100pF
CA13	24636478	EL, 0.47 μ F, 50V
CA14	24794470	EL, 47 μ F, 16V

Location No.	Part No.	Description
CA15	24636010	EL, 1 μ F, 50V
CA16	24212102	CD, 1000pF, \pm 10%
CA17	24436561	CD, 560pF
CA18	24212472	CD, 4700pF, \pm 10%
CA19	24212102	CD, 1000pF, \pm 10%
CA20	24436391	CD, 390pF
CA21	24436221	CD, 220pF
CA22	24550104	PF, 0.1 μ F, 63V
CA23	24550104	PF, 0.1 μ F, 63V
CA24	24550104	PF, 0.1 μ F, 63V
CA25	24636229	EL, 2.2 μ F, 50V
CA26	24232103	CD, 0.01 μ F, +80%, -20%
CA27	24530104	PF, 0.1 μ F, \pm 10%, 63V
CA28	24636100	EL, 10 μ F, 50V
CA29	24633100	EL, 10 μ F, 16V
CA30	24636010	EL, 1 μ F, 50V
CA32	24530104	PF, 0.1 μ F, \pm 10%, 63V
CB01	24436101	CD, 100pF
CD02	24232103	CD, 0.01 μ F, +80%, -20%
CD04	24232103	CD, 0.01 μ F, +80%, -20%
CD05	24232103	CD, 0.01 μ F, +80%, -20%
CD06	24436100	CD, 10pF, \pm 0.25pF
CD07	24232103	CD, 0.01 μ F, +80%, -20%
CD08	24232103	CD, 0.01 μ F, +80%, -20%
CD10	24232103	CD, 0.01 μ F, +80%, -20%
CD11	24232103	CD, 0.01 μ F, +80%, -20%
CD12	24232103	CD, 0.01 μ F, +80%, -20%
CD13	24633220	EL, 22 μ F, 16V
CD15	24355620	CD, 62pF
CD16	24340220	CD, 22pF
CD17	24436201	CD, 200pF
CD18	24353150	CD, 15pF
CD51	24093928	Variable Capacitor, 5.2 to 30pF, 100V
CE11	24636100	EL, 10 μ F, 50V
CE12	24085991	EL, 1 μ F, \pm 20%, 25V, Non-Polar
CE14	24636478	EL, 0.47 μ F, 50V
CE15	24633100	EL, 10 μ F, 16V
CE16	24530224	PF, 0.22 μ F, \pm 10%, 63V
CE17	24085991	EL, 1 μ F, \pm 20%, 25V, Non-Polar
CF01	24232103	CD, 0.01 μ F, +80%, -20%
CF02	24636100	EL, 10 μ F, 50V
CF03	24794470	EL, 47 μ F, 16V
CF04	24085028	EL, 2.2 μ F, 25V, Non-Polar
CF05	24550683	PF, 0.068 μ F, 63V
CF06	24436221	CD, 220pF
CF07	24232103	CD, 0.01 μ F, +80%, -20%
CF08	24550473	PF, 0.047 μ F, 63V
CF09	24353180	CD, 18pF
CF11	24550473	PF, 0.047 μ F, 63V
CF12	24794470	EL, 47 μ F, 16V
CF13	24232103	CD, 0.01 μ F, +80%, -20%
CF14	24232103	CD, 0.01 μ F, +80%, -20%
CF16	24353180	CD, 18pF
CF20	24436150	CD, 15pF
CF21	24591102	PF, 1000pF
CF22	24436471	CD, 470pF
CF23	24550223	PF, 0.022 μ F, 63V
CF24	24436271	CD, 270pF
CF25	24436101	CD, 100pF
CF26	24353150	CD, 15pF
CF27	24436270	CD, 27pF

Location No.	Part No.	Description
CF36	24436561	CD, 560pF
CG01	24633100	EL, 10 μ F, 16V
CG02	24550222	PF, 2200pF, 63V
CG03	24794101	EL, 100 μ F, 16V
CG04	24794101	EL, 100 μ F, 16V
CG05	24633100	EL, 10 μ F, 16V
CG06	24794101	EL, 100 μ F, 16V
CG07	24794101	EL, 100 μ F, 16V
CG09	24530103	PF, 0.01 μ F, \pm 10%, 63V
CG10	24530103	PF, 0.01 μ F, \pm 10%, 63V
CG11	24794470	EL, 47 μ F, 16V
CG12	24794470	EL, 47 μ F, 16V
CG13	24530104	PF, 0.1 μ F, \pm 10%, 63V
CG15	24530224	PF, 0.22 μ F, \pm 10%, 63V
CG16	24530473	PF, 0.047 μ F, \pm 10%, 63V
CG17	24530223	PF, 0.022 μ F, \pm 10%, 63V
CG19	24794470	EL, 47 μ F, 16V
CG21	24232103	CD, 0.01 μ F, +80%, -20%
CG22	24232103	CD, 0.01 μ F, +80%, -20%
CG23	24232103	CD, 0.01 μ F, +80%, -20%
CG24	24085991	EL, 1 μ F, \pm 20%, 25V, Non-Polar
CG25	24085991	EL, 1 μ F, \pm 20%, 25V, Non-Polar
CG26	24436151	CD, 150pF
CG31	24633100	EL, 10 μ F, 16V
CH01	24636010	EL, 1 μ F, 50V
CH02	24636010	EL, 1 μ F, 50V
CH03	24636010	EL, 1 μ F, 50V
CH04	24636010	EL, 1 μ F, 50V
CH05	24636100	EL, 10 μ F, 50V
CH06	24232103	CD, 0.01 μ F, +80%, -20%
CH07	24636010	EL, 1 μ F, 50V
CH08	24636010	EL, 1 μ F, 50V
CH09	24636010	EL, 1 μ F, 50V
CH10	24085991	EL, 1 μ F, \pm 20%, 25V, Non-Polar
CH11	24085991	EL, 1 μ F, \pm 20%, 25V, Non-Polar
CH12	24085991	EL, 1 μ F, \pm 20%, 25V, Non-Polar
CH13	24636100	EL, 10 μ F, 50V
CH14	24636010	EL, 1 μ F, 50V
CH15	24636010	EL, 1 μ F, 50V
CH16	24636010	EL, 1 μ F, 50V
CH17	24636100	EL, 10 μ F, 50V
CH19	24794471	EL, 470 μ F, 16V
CH20	24232103	CD, 0.01 μ F, +80%, -20%
CH21	24212102	CD, 1000pF, \pm 10%
CH22	24232103	CD, 0.01 μ F, +80%, -20%
CH23	24212102	CD, 1000pF, \pm 10%
CH24	24212102	CD, 1000pF, \pm 10%
CH25	24212102	CD, 1000pF, \pm 10%
CH26	24212102	CD, 1000pF, \pm 10%
CH27	24212102	CD, 1000pF, \pm 10%
CH30	24550104	PF, 0.1 μ F, 63V
CM01	24436201	CD, 200pF
CM02	24436201	CD, 200pF
CM05	24232103	CD, 0.01 μ F, +80%, -20%
CM06	24357270	CD, 27pF
CM07	24550273	PF, 0.027 μ F, 63V
CM08	24232103	CD, 0.01 μ F, +80%, -20%
CM09	24232103	CD, 0.01 μ F, +80%, -20%
CM10	24436270	CD, 27pF

Location No.	Part No.	Description
CN01	24232103	CD, 0.01 μ F, +80%, -20%
CN02	24436180	CD, 18pF
CN03	24232103	CD, 0.01 μ F, +80%, -20%
CN04	24436270	CD, 27pF
CN06	24436820	CD, 82pF
CN07	24436470	CD, 47pF
CN10	24436101	CD, 100pF
CN15	24353150	CD, 15pF
CN16	24232103	CD, 0.01 μ F, +80%, -20%
CN17	24232103	CD, 0.01 μ F, +80%, -20%
CN18	24353300	CD, 30pF
CV01	24636229	EL, 2.2 μ F, 50V
CV02	24636229	EL, 2.2 μ F, 50V
CV03	24636100	EL, 10 μ F, 50V
CV04	24636229	EL, 2.2 μ F, 50V
CV05	24636229	EL, 2.2 μ F, 50V
CV06	24636100	EL, 10 μ F, 50V
CV07	24636100	EL, 10 μ F, 50V
CV08	24636229	EL, 2.2 μ F, 50V
CV09	24636229	EL, 2.2 μ F, 50V
CV10	24636100	EL, 10 μ F, 50V
CV11	24636229	EL, 2.2 μ F, 50V
CV12	24636229	EL, 2.2 μ F, 50V
CV13	24636100	EL, 10 μ F, 50V
CV15	24636010	EL, 1 μ F, 50V
CV16	24232103	CD, 0.01 μ F, +80%, -20%
CV17	24232103	CD, 0.01 μ F, +80%, -20%
CV18	24633100	EL, 10 μ F, 16V
CV20	24436471	CD, 470pF
CV21	24436471	CD, 470pF
CV22	24633100	EL, 10 μ F, 16V
CX02	24538474	PF, 0.47 μ F
CX03	24538474	PF, 0.47 μ F
CX04	24538474	PF, 0.47 μ F
RESISTORS		
R101	24366131	CF, 130 ohm
R102	24366151	CF, 150 ohm
R103	24366561	CF, 560 ohm
R104	24366682	CF, 6800 ohm
R105	24366332	CF, 3300 ohm
R106	24366271	CF, 270 ohm
R108	24366271	CF, 270 ohm
R109	24366331	CF, 330 ohm
R110	24366101	CF, 100 ohm
R111	24366183	CF, 18k ohm
R112	24366242	CF, 2400 ohm
R113	24366202	CF, 2k ohm
R114	24366271	CF, 270 ohm
R115	24366271	CF, 270 ohm
R116	24366821	CF, 820 ohm
△ R117	24383360	OMF, 36 ohm, 2W
R118	24366103	CF, 10k ohm
R119	24366103	CF, 10k ohm
△ R120	24382151	OMF, 150 ohm, 1W
R121	24366392	CF, 3900 ohm
R123	24366622	CF, 6200 ohm
R124	24366103	CF, 10k ohm
R202	24366181	CF, 180 ohm
R203	24366182	CF, 1800 ohm
R204	24366152	CF, 1500 ohm
R205	24366391	CF, 390 ohm
R206	24366103	CF, 10k ohm
R207	24366103	CF, 10k ohm

Location No.	Part No.	Description
R208	24366101	CF, 100 ohm
R209	24366103	CF, 10k ohm
R210	24366203	CF, 20k ohm
R211	24366622	CF, 6200 ohm
R212	24366103	CF, 10k ohm
R213	24366101	CF, 100 ohm
R214	24366182	CF, 1800 ohm
R215	24366152	CF, 1500 ohm
R216	24366133	CF, 13k ohm
R217	24366101	CF, 100 ohm
R218	24366222	CF, 2200 ohm
R219	24366472	CF, 4700 ohm
R220	24366472	CF, 4700 ohm
R221	24366473	CF, 47k ohm
R222	24366473	CF, 47k ohm
R224	24366682	CF, 6800 ohm
R225	24366132	CF, 1300 ohm
R242	24366183	CF, 18k ohm
R243	24366223	CF, 22k ohm
R252	24061592	VR, 1k ohm, 1/8W
R253	24061592	VR, 1k ohm, 1/8W
R255	24066952	VR, 10k ohm, 1/10W
R301	24366131	CF, 130 ohm
R302	24366244	CF, 240k ohm
R303	24366303	CF, 30k ohm
R304	24366102	CF, 1k ohm
R305	24366161	CF, 160 ohm
R306	24366471	CF, 470 ohm
R310	24366274	CF, 270k ohm
△ R311	24552242	OMF, 2400 ohm, 1/2W
R315	24366163	CF, 16k ohm
R316	24366183	CF, 18k ohm
△ R317	24383391	OMF, 390 ohm, 2W
R318	24366434	CF, 430k ohm
△ R319	24381302	OMF, 3k ohm, 1/2W
△ R323	24322129	OMF, 1.2 ohm, 1W
△ R324	24552122	OMF, 1200 ohm, 1/2W
△ R327	24532130	OMF, 13 ohm, 1W
R333	24366102	CF, 1k ohm
R351	24066950	VR, 50k ohm, 1/10W
R360	24366184	CF, 180k ohm
R362	24366153	CF, 15k ohm
R386	24366561	CF, 560 ohm
R402	24366273	CF, 27k ohm
R403	24366302	CF, 3k ohm
△ R404	24552432	OMF, 4300 ohm, 1/2W
R405	24366511	CF, 510 ohm
R406	24366431	CF, 430 ohm
R407	24366161	CF, 160 ohm
R408	24366682	CF, 6800 ohm
R409	24366103	CF, 10k ohm
△ R410	24552472	OMF, 4700 ohm, 1/2W
R411	24366391	CF, 390 ohm
R412	24366121	CF, 120 ohm
R413	24366103	CF, 10k ohm
R414	24366472	CF, 4700 ohm
△ R416	24007566	Cement, 2k ohm, 5W
R417	24366510	CF, 51 ohm
△ R420	24009951	OMF, 1k ohm, 1W
△ R440	24552103	OMF, 10k ohm, 1/2W
△ R441	24552103	OMF, 10k ohm, 1/2W
△ R442	24553102	OMF, 1k ohm, 1W
△ R444	24007768	Cement, 15 ohm, 10W
△ R445	24552330	OMF, 33 ohm, 1/2W

Location No.	Part No.	Description
△ R448	24984229	MF, 2.2 ohm, 2W
R451	24066951	VR, 20k ohm, 1/10W
R452	24069547	VR, 5k ohm, 0.08W
R501	24366821	CF, 820 ohm
R502	24366334	CF, 330k ohm
R503	24366202	CF, 2k ohm
R504	24366391	CF, 390 ohm
R505	24366822	CF, 8200 ohm
R507	24366822	CF, 8200 ohm
R508	24366821	CF, 820 ohm
R509	24366203	CF, 20k ohm
R510	24366101	CF, 100 ohm
R511	24366562	CF, 5600 ohm
R512	24366152	CF, 1500 ohm
R513	24366152	CF, 1500 ohm
R515	24366221	CF, 220 ohm
R516	24366221	CF, 220 ohm
R517	24366221	CF, 220 ohm
R521	24366102	CF, 1k ohm
R522	24360185	CF, 1.8M ohm, 1/8W
R523	24366303	CF, 30k ohm
R524	24366103	CF, 10k ohm
R525	24366103	CF, 10k ohm
R526	24366122	CF, 1200 ohm
R527	24366122	CF, 1200 ohm
R531	24366271	CF, 270 ohm
R532	24366431	CF, 430 ohm
R533	24366561	CF, 560 ohm
R535	24366561	CF, 560 ohm
R537	24366561	CF, 560 ohm
R538	24366511	CF, 510 ohm
R539	24366561	CF, 560 ohm
R541	24366821	CF, 820 ohm
R542	24366271	CF, 270 ohm
R543	24366103	CF, 10k ohm
R544	24366101	CF, 100 ohm
R547	24366101	CF, 100 ohm
R548	24366101	CF, 100 ohm
R549	24366101	CF, 100 ohm
R551	24066955	VR, 1k ohm, 1/10W
R557	24061591	VR, 2k ohm, 1/8W
R558	24061591	VR, 2k ohm, 1/8W
R559	24061591	VR, 2k ohm, 1/8W
R565	24366560	CF, 56 ohm
R566	24366560	CF, 56 ohm
R567	24366560	CF, 56 ohm
R568	24366102	CF, 1k ohm
△ R591	24009974	OMF, 15k ohm, 2W
△ R592	24009974	OMF, 15k ohm, 2W
△ R593	24009974	OMF, 15k ohm, 2W
R601	24366102	CF, 1k ohm
R602	24366102	CF, 1k ohm
R603	24366153	CF, 15k ohm
R604	24366112	CF, 1100 ohm
R605	24366162	CF, 1600 ohm
R612	24366184	CF, 180k ohm
R613	24366274	CF, 270k ohm
R614	24366153	CF, 15k ohm
R619	24366122	CF, 1200 ohm
R620	24366103	CF, 10k ohm
R621	24366122	CF, 1200 ohm
R622	24366122	CF, 1200 ohm
R624	24366154	CF, 150k ohm
R625	24366154	CF, 150k ohm

Location No.	Part No.	Description
R626	24366472	CF, 4700 ohm
R627	24366472	CF, 4700 ohm
R628	24366103	CF, 10k ohm
R629	24366103	CF, 10k ohm
R632	24366562	CF, 5600 ohm
R633	24366562	CF, 5600 ohm
R634	24366103	CF, 10k ohm
R635	24366392	CF, 3900 ohm
R636	24366104	CF, 100k ohm
R639	24366332	CF, 3300 ohm
R640	24366182	CF, 1800 ohm
R642	24366182	CF, 1800 ohm
R643	24366182	CF, 1800 ohm
R644	24366229	CF, 2.2 ohm
R645	24366229	CF, 2.2 ohm
R646	24366223	CF, 22k ohm
R647	24366223	CF, 22k ohm
R648	24366682	CF, 6800 ohm
R649	24366682	CF, 6800 ohm
R664	24366331	CF, 330 ohm
R665	24366563	CF, 56k ohm
R666	24366563	CF, 56k ohm
R667	24366102	CF, 1k ohm
R668	24366102	CF, 1k ohm
R669	24366102	CF, 1k ohm
R674	24366561	CF, 560 ohm
R675	24366102	CF, 1k ohm
R676	24366103	CF, 10k ohm
R677	24366103	CF, 10k ohm
R679	24366102	CF, 1k ohm
R680	24366152	CF, 1500 ohm
R681	24366223	CF, 22k ohm
R682	24366105	CF, 1M ohm
R683	24366272	CF, 2700 ohm
R684	24366222	CF, 2200 ohm
R685	24366102	CF, 1k ohm
△ R686	24552431	OMF, 430 ohm, 1/2W
△ R690	24552181	OMF, 180 ohm, 1/2W
△ R691	24552181	OMF, 180 ohm, 1/2W
R801	24942565	CC, 5.6M ohm, 1/2W
△ R805	24007857	Cement, 6.2 ohm, 15W
△ R810	24384683	OMF, 68k ohm, 3W
△ R811	24531110	FR, 10 ohm, 1/2W
△ R812	24321689	OMF, 6.8 ohm, 1/2W
△ R813	24553471	OMF, 470 ohm, 1W
△ R814	24322399	OMF, 3.9 ohm, 1W
R815	24367683	CF, 68k ohm, ±2%
R816	24367123	CF, 12k ohm, ±2%
△ R817	24007952	Cement, 6.8 ohm, 5W
R818	24366331	CF, 330 ohm
△ R819	24327114	MF, 110k ohm, ±1%, 1/4W
R820	24366100	CF, 10 ohm
R821	24366101	CF, 100 ohm
△ R822	24322518	OMF, 0.51 ohm, 1W
△ R823	24007738	Cement, 330 ohm, 10W
△ R824	24322518	OMF, 0.51 ohm, 1W
R825	24366101	CF, 100 ohm
R826	24366331	CF, 330 ohm
△ R827	24383822	OMF, 8200 ohm, 2W
R828	24366103	CF, 10k ohm
△ R830	24552471	OMF, 470 ohm, 1/2W
R831	24366102	CF, 1k ohm
△ R832	24321338	OMF, 0.33 ohm, 1/2W
△ R833	24327104	MF, 100k ohm, ±1%, 1/4W

Location No.	Part No.	Description
△ R834	24327222	MF, 2200 ohm, $\pm 1\%$, 1/4W
R835	24366823	CF, 82k ohm
△ R836	24327104	MF, 100k ohm, $\pm 1\%$, 1/4W
△ R837	24381100	OMF, 10 ohm, 1/2W
R838	24366103	CF, 10k ohm
R840	24366103	CF, 10k ohm
△ R841	24381562	OMF, 5600 ohm, 1/2W
△ R842	24383153	OMF, 15k ohm, 2W
R843	24366332	CF, 3300 ohm
R844	24366103	CF, 10k ohm
R845	24366332	CF, 3300 ohm
R847	24366102	CF, 1k ohm
R848	24366821	CF, 820 ohm
△ R849	24546339	FR, 3.3 ohm, 1/2W
R851	24066924	VR, 50k ohm, 1/10W
R852	24066925	VR, 20k ohm, 1/10W
R860	24366182	CF, 1800 ohm
△ R861	24982398	OMF, 0.39 ohm, 1/2W
△ R862	24546829	FR, 8.2 ohm, 1/2W
R865	24366222	CF, 2200 ohm
R867	24366472	CF, 4700 ohm
R868	24366103	CF, 10k ohm
R869	24366102	CF, 1k ohm
R870	24366102	CF, 1k ohm
R871	24366222	CF, 2200 ohm
R872	24366103	CF, 10k ohm
△ R873	24383621	OMF, 620 ohm, 2W
R874	24366123	CF, 12k ohm
△ R890	24000630	PTC Thermistor, Dual
R901	24946272	CC, 2700 ohm, $\pm 10\%$, 1/2W
R902	24946272	CC, 2700 ohm, $\pm 10\%$, 1/2W
R903	24946272	CC, 2700 ohm, $\pm 10\%$, 1/2W
△ R920	24000938	FR, 0.47 ohm, $\pm 10\%$, 2W
RA01	24366223	CF, 22k ohm
RA02	24366472	CF, 4700 ohm
RA03	24366472	CF, 4700 ohm
RA05	24366223	CF, 22k ohm
RA06	24366223	CF, 22k ohm
RA07	24366101	CF, 100 ohm
RA08	24366224	CF, 220k ohm
RA09	24366102	CF, 1k ohm
RA10	24366102	CF, 1k ohm
RA11	24366102	CF, 1k ohm
RA12	24366103	CF, 10k ohm
RA13	24366332	CF, 3300 ohm
RA14	24366103	CF, 10k ohm
RA15	24366103	CF, 10k ohm
RA16	24366102	CF, 1k ohm
RA18	24366331	CF, 330 ohm
RA19	24366223	CF, 22k ohm
RA20	24366102	CF, 1k ohm
RA21	24366223	CF, 22k ohm
RA22	24366333	CF, 33k ohm
RA23	24366333	CF, 33k ohm
RA24	24366333	CF, 33k ohm
RA25	24360225	CF, 2.2M ohm, 1/8W
RA26	24366102	CF, 1k ohm
RA27	24366333	CF, 33k ohm
RA28	24366473	CF, 47k ohm
RA29	24366123	CF, 12k ohm
RA30	24366102	CF, 1k ohm
RA31	24366102	CF, 1k ohm
RA34	24366103	CF, 10k ohm
RA35	24366152	CF, 1500 ohm

Location No.	Part No.	Description
RA36	24366473	CF, 47k ohm
RA37	24366103	CF, 10k ohm
RA38	24366392	CF, 3900 ohm
RA39	24366123	CF, 12k ohm
RA40	24366563	CF, 56k ohm
RA41	24366564	CF, 560k ohm
RA42	24366561	CF, 560 ohm
RA43	24366471	CF, 470 ohm
RA44	24366102	CF, 1k ohm
RA45	24366102	CF, 1k ohm
RA46	24366163	CF, 16k ohm
RA47	24366102	CF, 1k ohm
RA48	24366102	CF, 1k ohm
RA49	24366153	CF, 15k ohm
RA60	24366102	CF, 1k ohm
RA61	24366103	CF, 10k ohm
RA67	24366102	CF, 1k ohm
RA70	24941565	CC, 5.6M ohm, 1/4W
RA71	24941565	CC, 5.6M ohm, 1/4W
RA72	24941565	CC, 5.6M ohm, 1/4W
RA73	24941565	CC, 5.6M ohm, 1/4W
RA75	24366102	CF, 1k ohm
RA77	24366102	CF, 1k ohm
RA84	24366103	CF, 10k ohm
RA85	24366103	CF, 10k ohm
RA86	24366102	CF, 1k ohm
RA89	24366102	CF, 1k ohm
RA91	24366102	CF, 1k ohm
RA93	24366102	CF, 1k ohm
RA95	24366102	CF, 1k ohm
RA96	24366471	CF, 470 ohm
RA97	24366471	CF, 470 ohm
RA98	24366102	CF, 1k ohm
RA99	24366102	CF, 1k ohm
RB01	24366102	CF, 1k ohm
RB02	24366102	CF, 1k ohm
RB03	24366103	CF, 10k ohm
RB04	24366103	CF, 10k ohm
RB05	24366332	CF, 3300 ohm
RB06	24366103	CF, 10k ohm
RB07	24366332	CF, 3300 ohm
RB08	24366473	CF, 47k ohm
RD02	24366103	CF, 10k ohm
RD03	24366103	CF, 10k ohm
RD04	24366152	CF, 1500 ohm
RD05	24366152	CF, 1500 ohm
RD06	24366682	CF, 6800 ohm
RD07	24366103	CF, 10k ohm
RD08	24366103	CF, 10k ohm
RD09	24366103	CF, 10k ohm
RD10	24366103	CF, 10k ohm
RD11	24366102	CF, 1k ohm
RD13	24366153	CF, 15k ohm
RD14	24366512	CF, 5100 ohm
RD15	24366471	CF, 470 ohm
RD16	24366103	CF, 10k ohm
RE11	24366562	CF, 5600 ohm
RE12	24366392	CF, 3900 ohm
RE13	24366223	CF, 22k ohm
RE14	24366473	CF, 47k ohm
RE15	24366103	CF, 10k ohm
RE16	24366101	CF, 100 ohm
RE35	24366222	CF, 2200 ohm
RE36	24366823	CF, 82k ohm

Location No.	Part No.	Description
RE37	24366823	CF, 82k ohm
RE38	24366563	CF, 56k ohm
RE39	24366202	CF, 2k ohm
RE40	24366123	CF, 12k ohm
RE41	24366103	CF, 10k ohm
RE42	24366472	CF, 4700 ohm
RE43	24366563	CF, 56k ohm
RF02	24366272	CF, 2700 ohm
RF03	24366103	CF, 10k ohm
RF04	24366103	CF, 10k ohm
RF06	24366152	CF, 1500 ohm
RF08	24366152	CF, 1500 ohm
RF10	24366152	CF, 1500 ohm
RF11	24366683	CF, 68k ohm
RF12	24366473	CF, 47k ohm
RF14	24366122	CF, 1200 ohm
RF16	24366331	CF, 330 ohm
RF18	24366472	CF, 4700 ohm
RF19	24366101	CF, 100 ohm
RF20	24366331	CF, 330 ohm
RF21	24366223	CF, 22k ohm
RF22	24366223	CF, 22k ohm
RF23	24366223	CF, 22k ohm
RF24	24366332	CF, 3300 ohm
RF25	24366472	CF, 4700 ohm
RF26	24366471	CF, 470 ohm
RF27	24366471	CF, 470 ohm
RF34	24366471	CF, 470 ohm
RF35	24366472	CF, 4700 ohm
RF36	24366181	CF, 180 ohm
RF37	24366181	CF, 180 ohm
RF38	24366181	CF, 180 ohm
RG01	24366182	CF, 1800 ohm
RG02	24366103	CF, 10k ohm
RG03	24366103	CF, 10k ohm
RG06	24366104	CF, 100k ohm
RG07	24366104	CF, 100k ohm
RG09	24366473	CF, 47k ohm
RG12	24366303	CF, 30k ohm
RG13	24366103	CF, 10k ohm
RG14	24366822	CF, 8200 ohm
RG15	24366103	CF, 10k ohm
RG21	24366221	CF, 220 ohm
RG22	24366103	CF, 10k ohm
RG23	24366332	CF, 3300 ohm
RG24	24366332	CF, 3300 ohm
RG25	24366101	CF, 100 ohm
RG26	24366102	CF, 1k ohm
RG27	24366101	CF, 100 ohm
RG28	24366102	CF, 1k ohm
RG32	24366473	CF, 47k ohm
RG33	24366122	CF, 1200 ohm
RG34	24366122	CF, 1200 ohm
RG35	24366473	CF, 47k ohm
RG38	24366103	CF, 10k ohm
RG43	24366103	CF, 10k ohm
RG46	24366103	CF, 10k ohm
RG47	24366103	CF, 10k ohm
RG51	24066939	VR, 10k ohm, 1/10W
RG68	24366104	CF, 100k ohm
RG71	24366223	CF, 22k ohm
RH01	24366510	CF, 51 ohm
RH02	24366510	CF, 51 ohm
RH03	24366510	CF, 51 ohm

Location No.	Part No.	Description
RH04	24366101	CF, 100 ohm
RH05	24366101	CF, 100 ohm
RH06	24366101	CF, 100 ohm
RH07	24366220	CF, 22 ohm
RH08	24366220	CF, 22 ohm
RH09	24366220	CF, 22 ohm
RH10	24366102	CF, 1k ohm
RH11	24366102	CF, 1k ohm
RH12	24366102	CF, 1k ohm
RH13	24366472	CF, 4700 ohm
RH14	24366103	CF, 10k ohm
RH16	24366102	CF, 1k ohm
RH17	24366471	CF, 470 ohm
RH18	24366104	CF, 100k ohm
RH19	24366104	CF, 100k ohm
RH20	24366471	CF, 470 ohm
RH21	24366750	CF, 75 ohm
RH22	24366103	CF, 10k ohm
RH23	24366180	CF, 18 ohm
RH24	24366910	CF, 91 ohm
RH25	24366332	CF, 3300 ohm
RH26	24366123	CF, 12k ohm
RH27	24366152	CF, 1500 ohm
RH28	24366473	CF, 47k ohm
RH29	24366152	CF, 1500 ohm
RH30	24366473	CF, 47k ohm
RH31	24366102	CF, 1k ohm
RH33	24366910	CF, 91 ohm
RH34	24366104	CF, 100k ohm
RH35	24366104	CF, 100k ohm
RH36	24366820	CF, 82 ohm
RH37	24366820	CF, 82 ohm
RH38	24366104	CF, 100k ohm
RH39	24366104	CF, 100k ohm
RH40	24366242	CF, 2400 ohm
RH41	24366222	CF, 2200 ohm
RH42	24366242	CF, 2400 ohm
RH43	24366102	CF, 1k ohm
RH44	24366242	CF, 2400 ohm
RH45	24366102	CF, 1k ohm
RH46	24366102	CF, 1k ohm
RH47	24366103	CF, 10k ohm
RH48	24366332	CF, 3300 ohm
RH49	24366103	CF, 10k ohm
RH60	24366681	CF, 680 ohm
RH61	24366471	CF, 470 ohm
RH62	24366391	CF, 390 ohm
RH63	24366103	CF, 10k ohm
RH64	24366102	CF, 1k ohm
RH65	24366223	CF, 22k ohm
RM03	24366272	CF, 2700 ohm
RM04	24366432	CF, 4300 ohm
RM05	24366471	CF, 470 ohm
RM06	24366471	CF, 470 ohm
RM07	24941475	CC, 4.7M ohm, 1/4W
RM26	24366333	CF, 33k ohm
RN01	24366103	CF, 10k ohm
RN02	24366471	CF, 470 ohm
RN03	24366223	CF, 22k ohm
RN04	24366201	CF, 200 ohm
RN05	24366392	CF, 3900 ohm
RN06	24366102	CF, 1k ohm
RN07	24366103	CF, 10k ohm
RN08	24360185	CF, 1.8M ohm, 1/8W

Location No.	Part No.	Description
RN09	24366103	CF, 10k ohm
RN10	24366472	CF, 4700 ohm
RN11	24366222	CF, 2200 ohm
RN12	24366272	CF, 2700 ohm
RN13	24366103	CF, 10k ohm
RN14	24366103	CF, 10k ohm
RN15	24366223	CF, 22k ohm
RN16	24366103	CF, 10k ohm
RN21	24366332	CF, 3300 ohm
RN24	24366103	CF, 10k ohm
RN25	24366244	CF, 240k ohm
RN26	24366223	CF, 22k ohm
RN27	24366331	CF, 330 ohm
RN28	24366102	CF, 1k ohm
RN62	24366103	CF, 10k ohm
RN63	24366223	CF, 22k ohm
RN64	24366392	CF, 3900 ohm
RR06	24366391	CF, 390 ohm
RV01	24366271	CF, 270 ohm
RV02	24366182	CF, 1800 ohm
RV03	24366102	CF, 1k ohm
RV04	24366102	CF, 1k ohm
RV05	24366101	CF, 100 ohm
RV06	24366101	CF, 100 ohm
RV07	24366102	CF, 1k ohm
RV08	24366102	CF, 1k ohm
RV09	24366101	CF, 100 ohm
RV10	24366102	CF, 1k ohm
RV11	24366102	CF, 1k ohm
RV12	24366101	CF, 100 ohm
RV13	24366103	CF, 10k ohm
RV14	24366103	CF, 10k ohm
RV15	24366101	CF, 100 ohm
RV16	24366473	CF, 47k ohm
RV17	24366473	CF, 47k ohm
RV18	24366332	CF, 3300 ohm
RV19	24366222	CF, 2200 ohm
RV20	24366101	CF, 100 ohm
RV21	24366332	CF, 3300 ohm
RV23	24366332	CF, 3300 ohm
△ RV24	24552750	OMF, 75 ohm, 1/2W
RV25	24366331	CF, 330 ohm
RV26	24366391	CF, 390 ohm
RV27	24366104	CF, 100k ohm
RV28	24366473	CF, 47k ohm
RV29	24366223	CF, 22k ohm
RV30	24366223	CF, 22k ohm
RV31	24366223	CF, 22k ohm
RV32	24366473	CF, 47k ohm
RV33	24366332	CF, 3300 ohm
RV34	24366473	CF, 47k ohm
RV35	24366332	CF, 3300 ohm
RV36	24366473	CF, 47k ohm
RV37	24366473	CF, 47k ohm
RV38	24366392	CF, 3900 ohm
RV39	24366392	CF, 3900 ohm
RV40	24366103	CF, 10k ohm
RV41	24366103	CF, 10k ohm
RV42	24366223	CF, 22k ohm
RV43	24366223	CF, 22k ohm
RV44	24366102	CF, 1k ohm
RV45	24366102	CF, 1k ohm
RV46	24366102	CF, 1k ohm
RV47	24366104	CF, 100k ohm

Location No.	Part No.	Description
RV48	24366102	CF, 1k ohm
RX02	24366102	CF, 1k ohm
RX05	24366101	CF, 100 ohm
RX08	24366101	CF, 100 ohm
RX10	24366101	CF, 100 ohm
RX13	24366223	CF, 22k ohm
RX20	24366272	CF, 2700 ohm
RX21	24366272	CF, 2700 ohm
RX22	24366272	CF, 2700 ohm

COILS & TRANSFORMERS

L102	23238921	Coil, Peaking, TRF4120AC
L103	23238934	Coil, Peaking, TRF4109AC
L104	23221803	Coil, Choke, TLN3040D
L201	23237974	Coil, Peaking, TRF4121AC
L311	23261974	Coil, Choke, HC5-035
L405	23221739	Coil, Choke, TRF9252D
L406	23103859	Coil (Ferrite Bead), TEM2011
△ L411	23233065	Coil, Linearity, TLN2111
△ L462	23227339	Deflection Yoke, 4700-02
L503	23237987	Coil, Peaking, TRF4100AC
L551	23250972	Coil, 1H-Delay Matching, TRF5418D
L601	23237986	Coil, Peaking, TRF4120AC
L651	23232946	Coil, Variable, TRF3073D
L661	23238921	Coil, Peaking, TRF4120AC
L662	23232946	Coil, Variable, TRF3073D
L802	23221076	Coil, Choke, TLN1015R
L803	23261975	Coil, Choke, TRF9229
L804	23261975	Coil, Choke, TRF9229
L805	23221746	Coil, Choke, TLN3155D
L806	23103859	Coil (Ferrite Bead), TEM2011
L807	23238922	Coil, Peaking, TRF4100AC
L808	23222694	Coil, Width, TLN2026
L809	23103859	Coil (Ferrite Bead), TEM2011
L811	23103859	Coil (Ferrite Bead), TEM2011
L812	23237983	Coil, Peaking, TRF4220AC
L813	23237985	Coil, Peaking, TRF4150AC
△ L901	23200779	Coil, Degaussing, TSB-2231
LA01	23238934	Coil, Peaking, TRF4109AC
LB01	23262778	Coil, IF, TRF1112
LD05	23232946	Coil, Variable, TRF3073D
LF02	23238920	Coil, Peaking, TRF4150AC
LG01	23262808	Coil, IF, TRF1082
LM01	23262797	Coil, IF, TRF1093D
LM02	23272988	Coil, Chroma Demod, TRF5414
LM03	23272988	Coil, Chroma Demod, TRF5414
LM04	23262798	Coil, IF, TRF1092D
LN01	23237983	Coil, Peaking, TRF4220AC
LN02	23237985	Coil, Peaking, TRF4150AC
LV01	23237988	Coil, Peaking, TRF4829AC
△ T401	23224983	Transformer, Horiz. Drive, TLN1039
△ T461	23236201	Transformer, Flyback, TFB4090AD
T801	23211934	Line Filter, TRF3133
T802	23211928	Line Filter, TRF3129
△ T803	23213503	Transformer, Switch Mode, G4572-P4
△ T804	23224917	Transformer, Separation, TLN2122
TN01	23232880	Coil, Variable, TRF3505D

Location No.	Part No.	Description
TN02	23262843	Coil, PIF Trap, TRF1457D
SEMICONDUCTORS		
IC303	23119548	IC, AN5515
IC405	23318218	IC, μ PC7812H
IC501	B0379435	IC, TA8653N
IC601	B0356190	IC, TA7630P
IC602	B0325290	IC, TA7337P
IC605	23318413	IC, LA4282
IC661	B0383400	IC, TA8710S
IC803	23318411	IC, TEA2164
IC806	23318299	IC, L78MR05-FA
IC807	23318412	IC, TEA5170
ICA01	23318441	IC, M37100M8-583
ICA02	23119182	IC, PD6336C
ICA03	23318397	IC, M6M80021P
ICA12	23119441	IC, LA7910
ICD03	B0325290	IC, TA7337P
ICF01	23318097	IC, SAA5231
ICF02	23318383	IC, SAA5243P/E
ICF03	B0483990	IC, TC5565APL-12
ICG01	23119092	IC, TDA6600
ICG02	B0349250	IC, TA75393S
ICG03	B0470522	IC, TC4052BP
ICH01	23119139	IC, AN5862K
ICH02	23119139	IC, AN5862K
ICV01	B0383505	IC, TA8720AN
Q102	A6708871	Transistor, 2SC388ATM
Q103	23114691	Transistor, BC557A
Q104	23114689	Transistor, BC547A
Q105	23114689	Transistor, BC547A
Q201	23114689	Transistor, BC547A
Q202	23114689	Transistor, BC547A
Q203	23114632	Transistor, BC547B
Q204	23114689	Transistor, BC547A
Q205	23114689	Transistor, BC547A
Q301	23114632	Transistor, BC547B
Q303B	23035308	Screw, BTB3X8SZN
Q360	23114689	Transistor, BC547A
Q402	A6330069	Transistor, 2SC2482 FA-1
Q404	23314375	Transistor, BU508DF
Q404B	23030211	Screw, 3X14SN
Q405D	23030211	Screw, 3X14SN
Q502	23114691	Transistor, BC557A
Q503	23114691	Transistor, BC557A
Q505	23114693	Transistor, BF871
Q506	23114689	Transistor, BC547A
Q508	23114693	Transistor, BF871
Q509	23114689	Transistor, BC547A
Q511	23114693	Transistor, BF871
Q512	23114689	Transistor, BC547A
Q514	23114688	Transistor, BC327
Q515	23114689	Transistor, BC547A
Q604	23114689	Transistor, BC547A
Q606	23114689	Transistor, BC547A
Q609	23114691	Transistor, BC557A
Q610	A6342200	Transistor, 2SC2878-A
Q611	A6342200	Transistor, 2SC2878-A
Q660	23114689	Transistor, BC547A
Q672	23114689	Transistor, BC547A
Q804	23314547	Transistor, 2SC4199A
Q805	A6533750	Transistor, 2SA1013-O
Q809	23114632	Transistor, BC547B
Q810	A6328333	Transistor, 2SC2383-Y

Location No.	Part No.	Description
Q811	23114546	Transistor, BC557B
Q812	23314374	Transistor, BD945
Q813	23314374	Transistor, BD945
Q814	A6546310	Transistor, 2SA1297Y
Q815	23114632	Transistor, BC547B
Q816	A6867980	Transistor, 2SD1405-V
Q817	A6321240	Transistor, 2SC2120-Y
QA05	23114689	Transistor, BC547A
QA06	23114691	Transistor, BC557A
QA07	23114689	Transistor, BC547A
QA08	23114691	Transistor, BC557A
QA09	23114689	Transistor, BC547A
QA11	23114689	Transistor, BC547A
QA15	23114689	Transistor, BC547A
QB01	23114689	Transistor, BC547A
QB02	23114689	Transistor, BC547A
QE10	23114689	Transistor, BC547A
QE11	23114691	Transistor, BC557A
QE12	23114689	Transistor, BC547A
QF06	23114689	Transistor, BC547A
QF07	23114689	Transistor, BC547A
QF08	23114689	Transistor, BC547A
QG05	23114689	Transistor, BC547A
QG07	23114689	Transistor, BC547A
QG09	23114689	Transistor, BC547A
QG10	23114691	Transistor, BC557A
QG14	23114689	Transistor, BC547A
QG15	23114689	Transistor, BC547A
QG16	23114689	Transistor, BC547A
QG19	23114689	Transistor, BC547A
QH03	23114689	Transistor, BC547A
QH04	23114689	Transistor, BC547A
QH05	A6734590	Transistor, 2SC752GTM-Y
QH06	23114689	Transistor, BC547A
QH07	23114689	Transistor, BC547A
QH08	23114689	Transistor, BC547A
QN02	23114691	Transistor, BC557A
QN03	23114691	Transistor, BC557A
QN04	23114689	Transistor, BC547A
QN05	23114689	Transistor, BC547A
QN06	23114689	Transistor, BC547A
QN07	23114689	Transistor, BC547A
QN08	23114689	Transistor, BC547A
QN17	23114689	Transistor, BC547A
QV02	23114691	Transistor, BC557A
QV03	23114689	Transistor, BC547A
QV05	23114691	Transistor, BC557A
QV06	A6342200	Transistor, 2SC2878-A
QV07	A6342200	Transistor, 2SC2878-A
QV08	A6342200	Transistor, 2SC2878-A
QV09	23114632	Transistor, BC547B
QV11	A6342200	Transistor, 2SC2878-A
QV12	A6342200	Transistor, 2SC2878-A
QV14	23114691	Transistor, BC557A
QV15	23114691	Transistor, BC557A
D101	23115599	Diode, 1N4148
D241	A7150041	Diode, 1SS104
D302	23118479	Diode, BYD33J
D305	23118479	Diode, BYD33J
D314	A7117205	Diode, Zener, 04AZ12X
D315	A7116715	Diode, Zener, 04AZ7.5Y
D320	23115599	Diode, 1N4148
D321	23115599	Diode, 1N4148
D401	A7116925	Diode, Zener, 04AZ9.1Z

Location No.	Part No.	Description
D402	A7117715	Diode, Zener, 04AZ20Y
D403	23115603	Diode, Zener, ZPD12
D406	23118479	Diode, BYD33J
D408	23118052	Diode, RU4Z
D410	A7116815	Diode, Zener, 04AZ8.2Y
D594	23115599	Diode, 1N4148
D595	23115599	Diode, 1N4148
D596	23115599	Diode, 1N4148
D603	23115599	Diode, 1N4148
D604	23115599	Diode, 1N4148
D605	23115599	Diode, 1N4148
△ D803	23118173	Diode, RBV-406M-LFA
D807	23118479	Diode, BYD33J
D808	23118479	Diode, BYD33J
D809	23118479	Diode, BYD33J
D810	23118479	Diode, BYD33J
D811	A7117415	Diode, Zener, 04AZ15Y
D812	23118479	Diode, BYD33J
D813	23118479	Diode, BYD33J
D814	23118479	Diode, BYD33J
D815	23118479	Diode, BYD33J
D816	23118479	Diode, BYD33J
D817	23118451	Diode, RU4A
D818	23118451	Diode, RU4A
D819	23118479	Diode, BYD33J
D821	23115599	Diode, 1N4148
D822	A7275400	Diode, 1S2462
D823	A7275400	Diode, 1S2462
D824	23115599	Diode, 1N4148
D825	A7116425	Diode, Zener, 04AZ5.6Z
D826	23118479	Diode, BYD33J
D827	A7117305	Diode, Zener, 04AZ13X
D828	23118052	Diode, RU4Z
D830	23115599	Diode, 1N4148
D832	A7116715	Diode, Zener, 04AZ7.5Y
D835	23115599	Diode, 1N4148
D837	23115599	Diode, 1N4148
DA01	23115599	Diode, 1N4148
DA02	23115599	Diode, 1N4148
DA03	23115599	Diode, 1N4148
DA09	23115599	Diode, 1N4148
DA12	23115599	Diode, 1N4148
DA13	23115599	Diode, 1N4148
DA17	23115599	Diode, 1N4148
DA18	23115599	Diode, 1N4148
DA21	23115599	Diode, 1N4148
DA22	23115599	Diode, 1N4148
DA23	23115599	Diode, 1N4148
DA24	23115599	Diode, 1N4148
DA25	23115599	Diode, 1N4148
DA26	23115599	Diode, 1N4148
DA27	23115599	Diode, 1N4148
DA28	23115599	Diode, 1N4148
DA30	23115878	Diode, Zener, μ PC574J(L)
DA31	23115599	Diode, 1N4148
DA32	23115599	Diode, 1N4148
DA33	23115599	Diode, 1N4148
DA34	23115599	Diode, 1N4148
DD01	A7288601	Diode, 1S2186 FA-1
DD02	A7288601	Diode, 1S2186 FA-1
DD03	A7288601	Diode, 1S2186 FA-1
DE11	23115599	Diode, 1N4148
DE12	23115599	Diode, 1N4148
DE13	23115599	Diode, 1N4148

Location No.	Part No.	Description
DE40	23118969	Diode (LED), MV57124, Red
DF01	23115599	Diode, 1N4148
DF02	23115599	Diode, 1N4148
DF03	23115599	Diode, 1N4148
DF04	23115599	Diode, 1N4148
DF05	23115599	Diode, 1N4148
DG01	23115599	Diode, 1N4148
DG04	23115599	Diode, 1N4148
DG05	23115599	Diode, 1N4148
DG06	23115599	Diode, 1N4148
DG40	23318436	Diode (LED), MV53124A, Yellow
DG41	23318436	Diode (LED), MV53124A, Yellow
DH01	23115599	Diode, 1N4148
DH02	23115599	Diode, 1N4148
DH03	23115599	Diode, 1N4148
DH04	23115599	Diode, 1N4148
DH05	23115599	Diode, 1N4148
DH06	23115599	Diode, 1N4148
DH07	23115599	Diode, 1N4148
DH08	23115599	Diode, 1N4148
DH10	A7116215	Diode, Zener, 04AZ4.7Y
DH11	23115599	Diode, 1N4148
DH12	23115599	Diode, 1N4148
DH13	23115599	Diode, 1N4148
DH14	23115599	Diode, 1N4148
DH15	23115599	Diode, 1N4148
DH16	23115599	Diode, 1N4148
DH17	23115599	Diode, 1N4148
DH18	23115599	Diode, 1N4148
DH19	23115599	Diode, 1N4148
DH20	23115599	Diode, 1N4148
DH21	23115599	Diode, 1N4148
DH22	23115599	Diode, 1N4148
DH23	23115599	Diode, 1N4148
DN01	A7288601	Diode, 1S2186 FA-1
DN02	A7288601	Diode, 1S2186 FA-1
DN05	A7288601	Diode, 1S2186 FA-1
DN06	A7288601	Diode, 1S2186 FA-1
DV01	A7116915	Diode, Zener, 04AZ9.1Y
MISCELLANEOUS		
B205	23864331	Holder (Terminal)
△ F801	23144896	Fuse, 2.0A
F801A	23165102	Fuse Holder
H101	23148741	WG PLL VIF, MVGS01
K901	23120439	Remote Sensor, IR-9103-K
P003	23161699	Terminal, 4P
P661	23363607	Headphone Jack, 3.5mm
△ P801	23176705	Power Cord
PH01	23365025	Connector, 21Pin
PV01	23365506	Jack S+2P
PV02	23365351	Jack Phono, 3P
S001	23145467	Switch, Slide
S202	23145542	Switch, Lever, 1C3P
S301	23145682	Switch, Lever, 1C3P
△ S801	23145434	Switch, Power, 2C2P
SA01	23145428	Switch, Push, 1C1Px4
SA02	23145428	Switch, Push, 1C1Px4
SA03	23145428	Switch, Push, 1C1Px4
SA04	23145428	Switch, Push, 1C1Px4
SA05	23145429	Switch, Push, 1C1Px3
SA06	23145429	Switch, Push, 1C1Px3

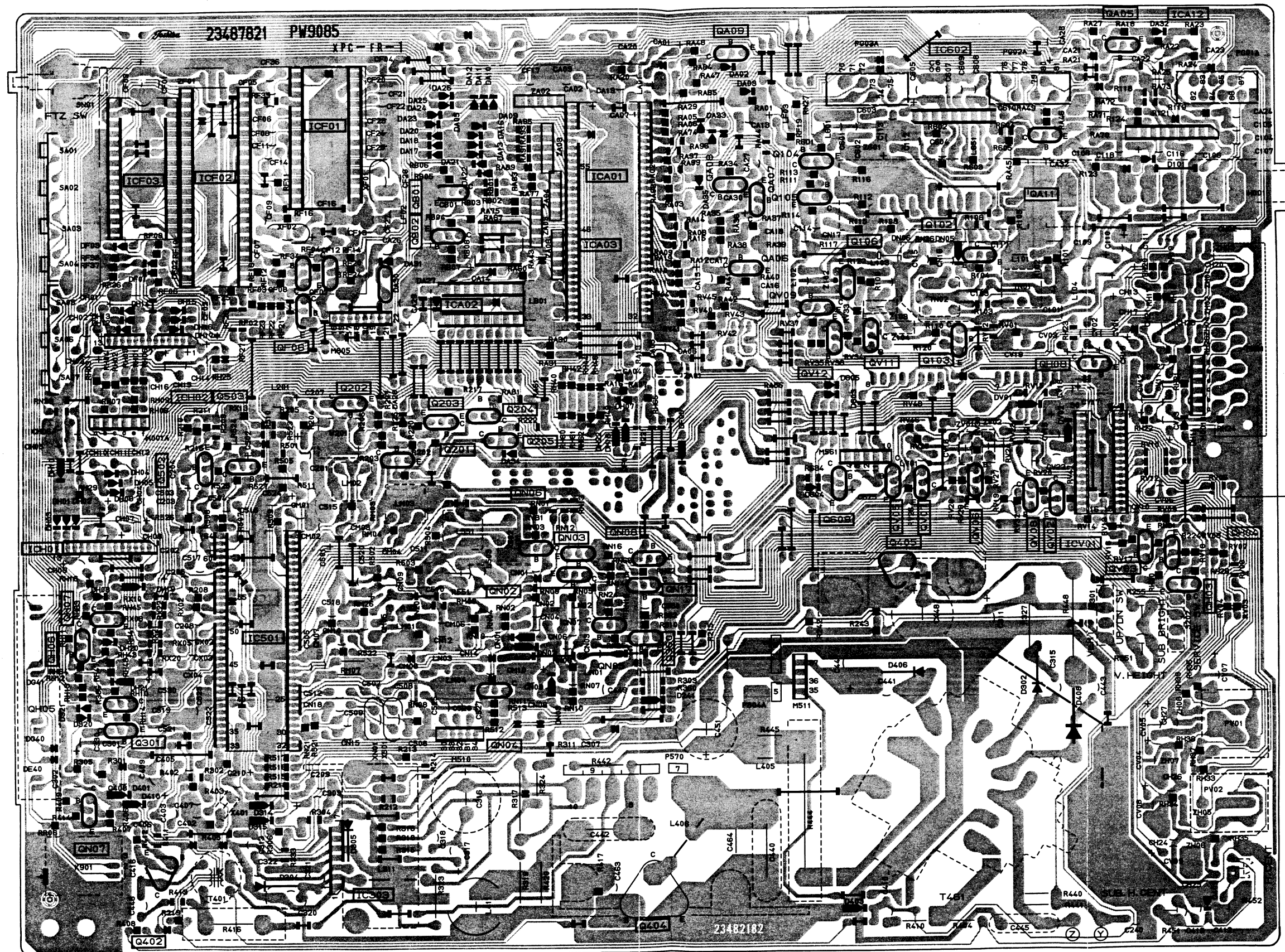
Location No.	Part No.	Description
SA07	23145429	Switch, Push, 1C1Px3
SN01	23145579	Switch, Push, 2C2P
△ V901A	23902353	Socket, CRT, 10P
W201	23250878	Coil, Delay Line, TRF2083
W661	23151200	Speaker, SPK-1268, 120x60mm, 8 ohm
W662	23151206	Speaker, SPK-1274, 70x60mm, 8 ohm
W663	23151200	Speaker, SPK-1268, 120x60mm, 8 ohm
W664	23151206	Speaker, SPK-1274, 70x60mm, 8 ohm
X401	23153886	Ceramic Resonator, TCR1012
X501	23153979	Crystal, 4.43MHz
X502	23250949	Delay Line, PAL Chroma, DL701
XF01	23153657	Crystal, 13.875MHz
XF02	23153866	Crystal, 6.0MHz
XN01	23153961	Crystal, 3.58MHz
Z102	23107927	Ceramic Video Trap, 5.5MHz, TCF1011
Z103	23107913	Ceramic Video Trap, 6.5MHz, TCF1018
Z601	23107856	Ceramic Filter, 5.74MHz, TCF1030
Z602	23107855	Ceramic Filter, 5.5MHz, TCF1031
Z661	23107855	Ceramic Filter, 5.5MHz, TCF1031
Z662	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
Z663	23107949	Ceramic Filter, 6.5MHz, SFE6.5MBF
Z664	23153900	Ceramic Resonator, 500kHz, TCR1010
Z666	23107948	Ceramic Filter, 6.0MHz, SFE6.0MBF
Z670	23107742	Filter, 3MHz, TEM1014
Z671	23107742	Filter, 3MHz, TEM1014
Z672	23107742	Filter, 3MHz, TEM1014
Z673	23107742	Filter, 3MHz, TEM1014
Z674	23107742	Filter, 3MHz, TEM1014
Z675	23107742	Filter, 3MHz, TEM1014
ZA01	23153847	Ceramic Resonator, 4MHz, TCR1014
ZA02	24094651	Capacitor Block, 100pFx4, 50V
ZA03	24000865	Resistor Block, 47k ohmx4
ZA04	24000865	Resistor Block, 47k ohmx4
ZA05	24000916	Resistor Block, 4700 ohmx4
ZA06	24000916	Resistor Block, 4700 ohmx4
ZF01	23107746	Filter, 3MHz, TEM1010
ZH01	23107742	Filter, 3MHz, TEM1014
ZH02	23107744	Filter, 3MHz, TEM1012
ZH03	23107742	Filter, 3MHz, TEM1014
ZH04	23107744	Filter, 3MHz, TEM1012
ZH05	23107744	Filter, 3MHz, TEM1012
ZH06	23107744	Filter, 3MHz, TEM1012
ZH07	23107744	Filter, 3MHz, TEM1012
ZH08	23107744	Filter, 3MHz, TEM1012
ZV01	23107849	Ceramic Video Trap, 4.43MHz, TCF1032
ZV02	23107787	Ceramic Video Trap, 3.58MHz, TCF1044

Location No.	Part No.	Description
PC BOARD ASSEMBLIES		
U902A	23335467	Main Board, PW9085
U903A	23335468	Power/Audio Board, PW9086-1
U903B	23335469	MPX Str. Board, PW9086-2
U903C	23335470	CRT Drive Board, PW9086-3
U903D	23335621	Tone Board, PW9086-4
PICTURE TUBE		
△ V901	23312067	Picture Tube, A51EBV12X01
TUNER		
H001	23121613	Tuner, VHF/UHF, EG443A
REMOTE HAND SET PARTS		
K902	23120490	Remote Hand Unit, CT9379
AT01	23300903	Upper Case
AT02	23300759	Lower Case
AT03	23300760	Battery Cover
AT04	23309657	Filter
ST01	23300904	Rubber Sheet
UT01	23335526	PC Board, PW6982
ZT01	23153736	Ceramic Resonator, CSB455EB20

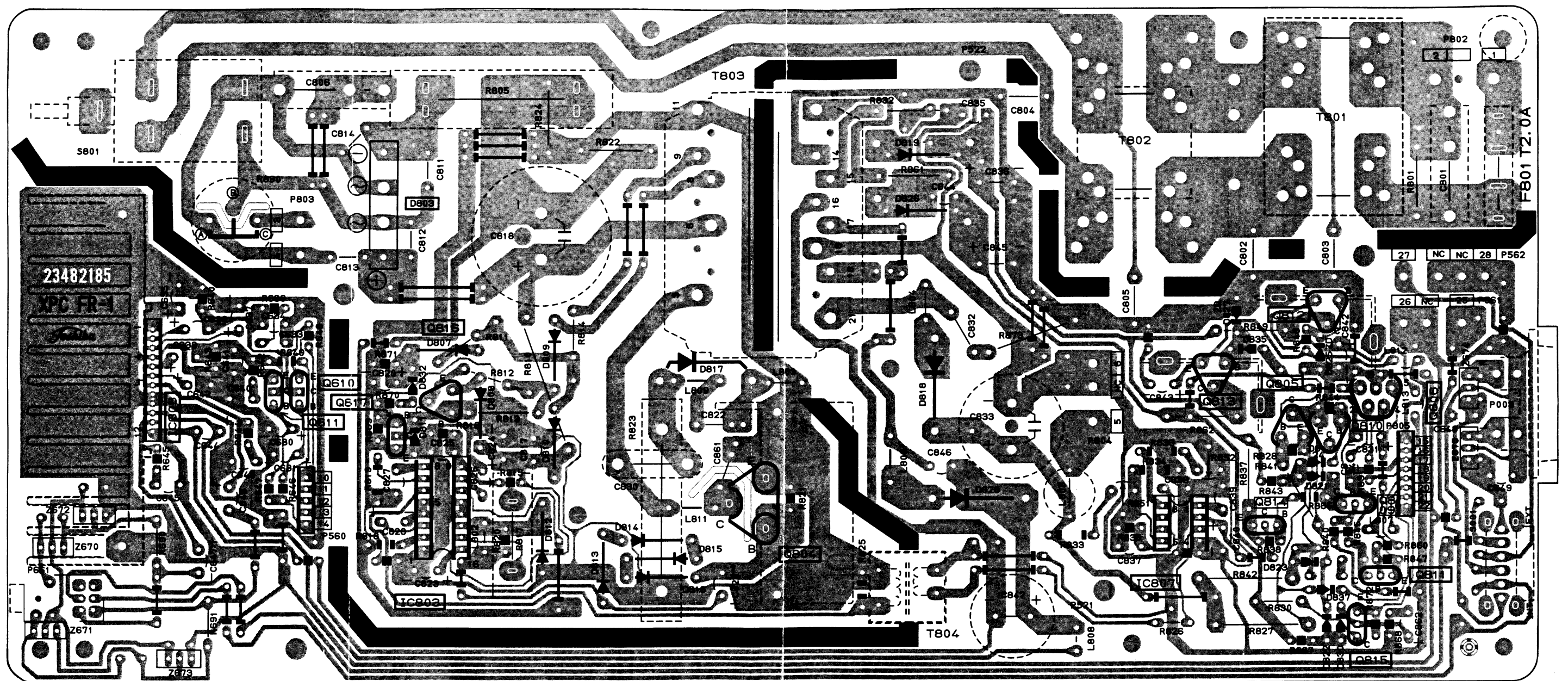
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MAIN BOARD PW9085

BOTTOM (FOIL) SIDE

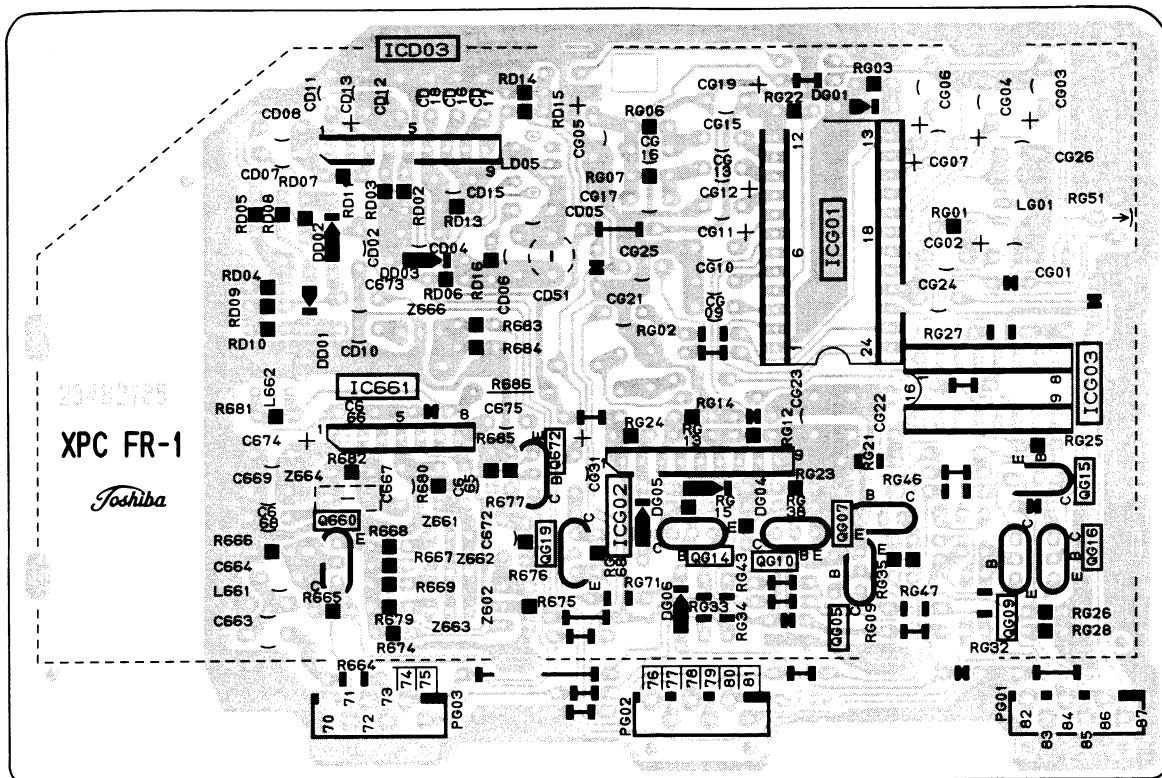


POWER/AUDIO BOARD PW9086-1
BOTTOM (FOIL) SIDE



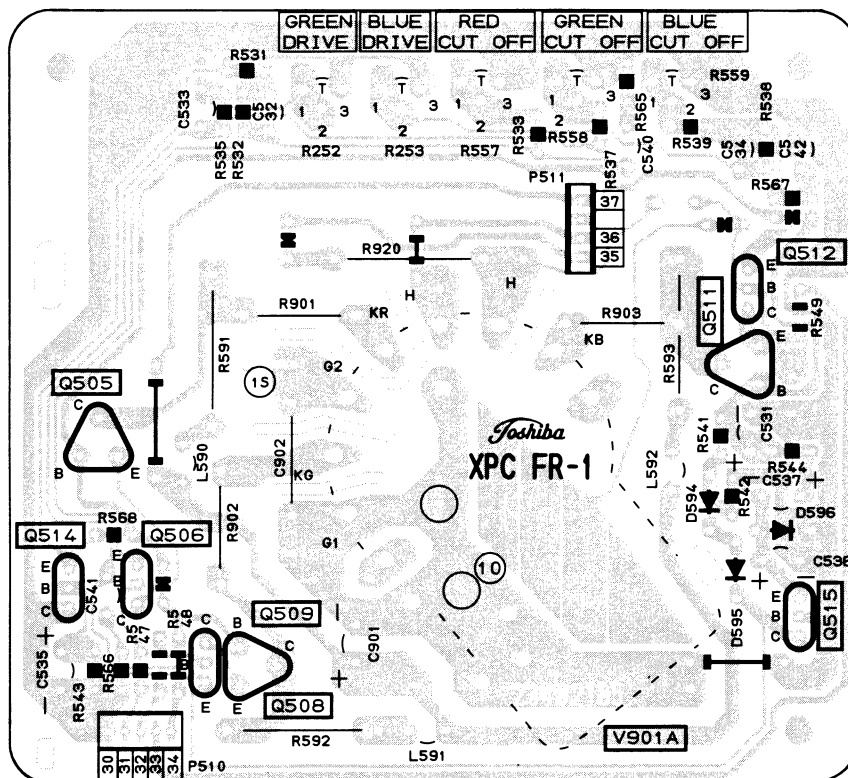
MPX STEREO BOARD PW9086-2

BOTTOM (FOIL) SIDE

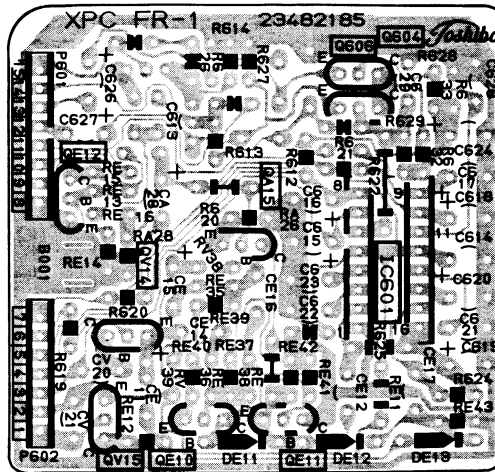


CRT DRIVE BOARD PW9086-3

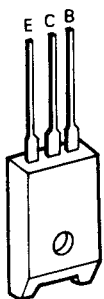
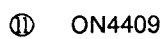
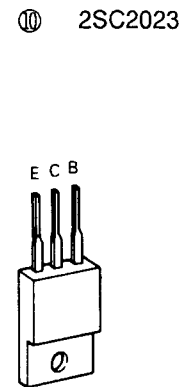
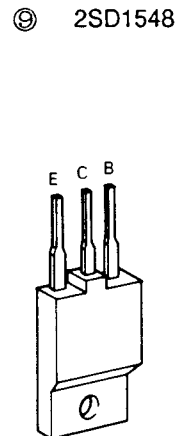
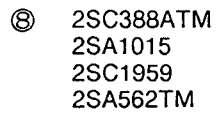
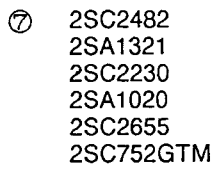
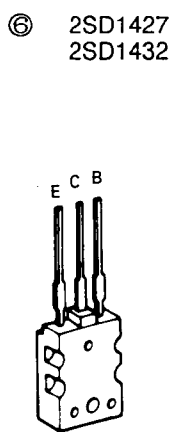
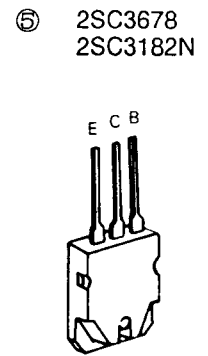
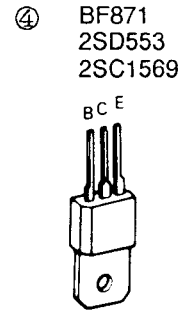
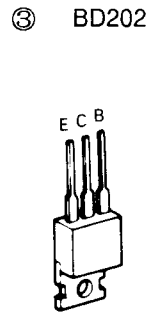
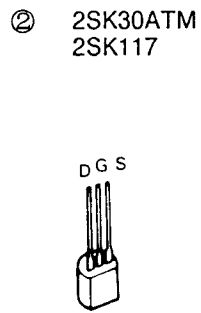
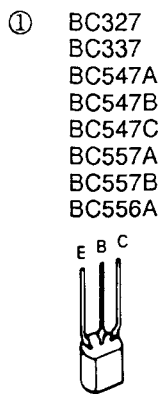
BOTTOM (FOIL) SIDE



tone CONT. BOARD PW9086-4
bottom (foil) side



TERMINAL VIEW OF TRANSISTORS



217D9D

SCHEMATIC DIAGRAM (1/2)

IMPORTANT SAFETY NOTICE

Component marked with the International Hazard Symbol must, if changed, be replaced by an approved type and must be mounted as the original. This will ensure that the safety standards adhered to during manufacture will be maintained following any servicing procedure.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (—) or ground lead of instruments should be connected to the ground marked (⊥) in the schematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⦿) on checking isolated circuit.
3. The voltage readings may vary as much as $\pm 20\%$.
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast, Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

NOTES:

1. This circuit diagram is subject to change without notice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, $k=1,000$, $M=1,000,000$.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH , and the values less than 1 in H.

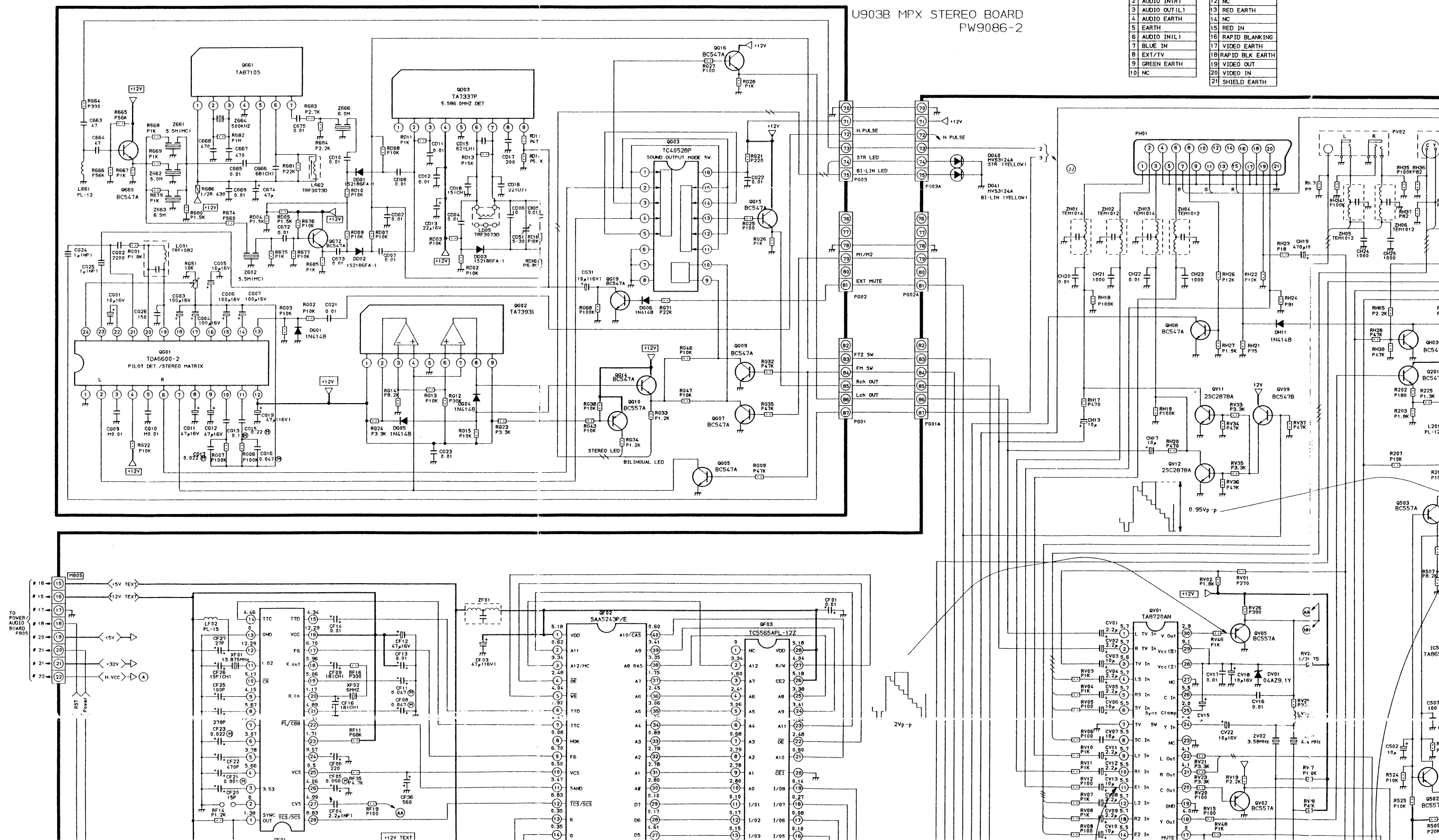
GROUNDING SYMBOL

1. \perp : Non isolated ground, $\overline{\perp}$: Isolated ground.

RESISTORS

Prefixed to values:

TYPE
Carbon Composite
Oxide Metal
Ins. Carbon Fiber
Wire Wound
Cement covered
Fusible Resin



RESISTORS

Prefixed to values:

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

TOLERANCE	MARK
$\pm 1\%$	(F)
$\pm 2\%$	(G)

Suffixes to VR values:

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

Rating Markings:

WATTAGE	MARK
1/6W	
1/4W	
1/2W	
1W	
2W	

WATTAGE	MARK
3W	
5W	
10W	
15W	
20W	
25W	

CAPACITORS

Rating Markings:

Type	Mark
Ceramic Disc 50V Only	
Electrolytic	
Electrolytic Non-Polar	
Variable Capacitor	
Other	

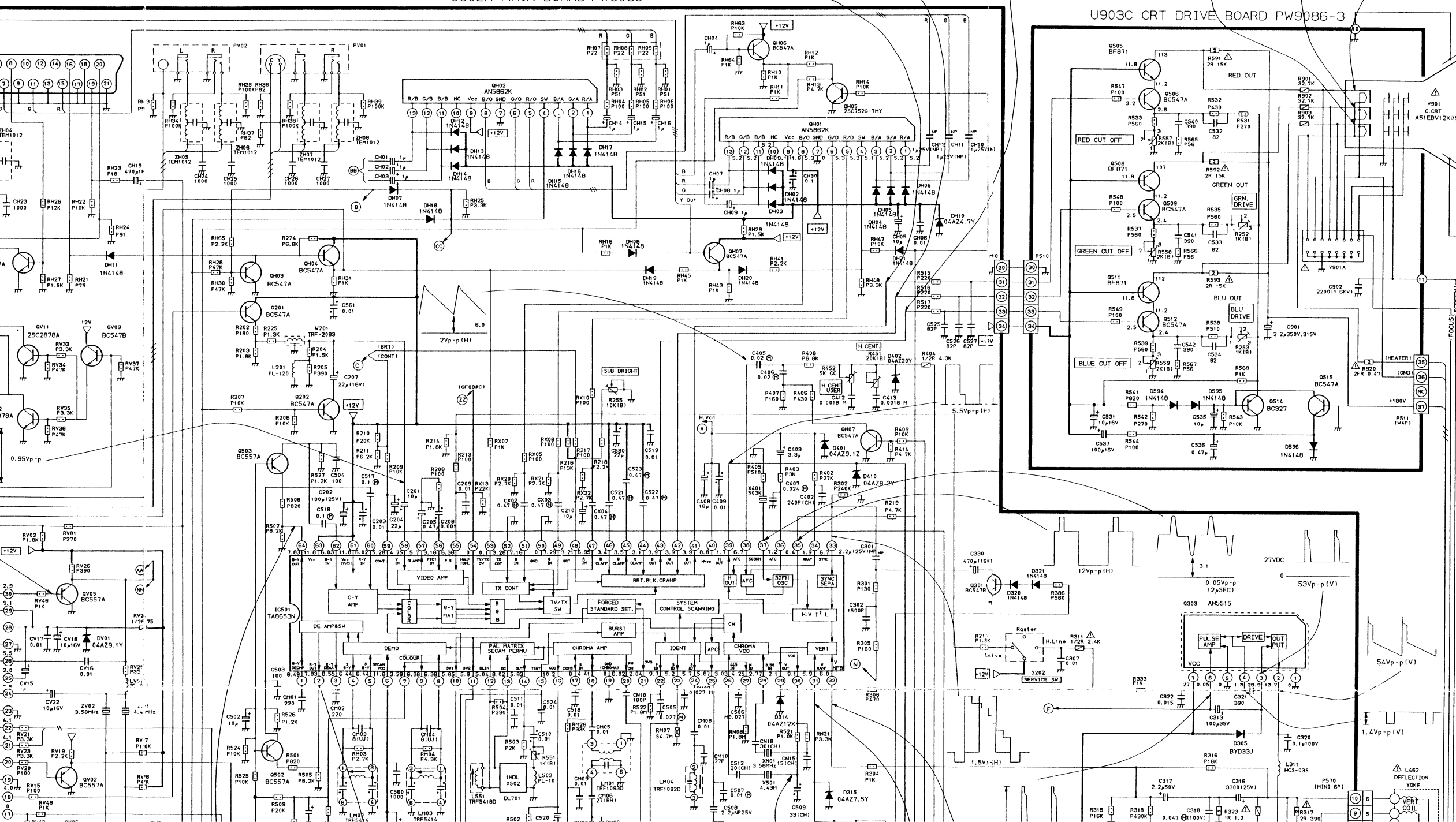
1 are expressed in

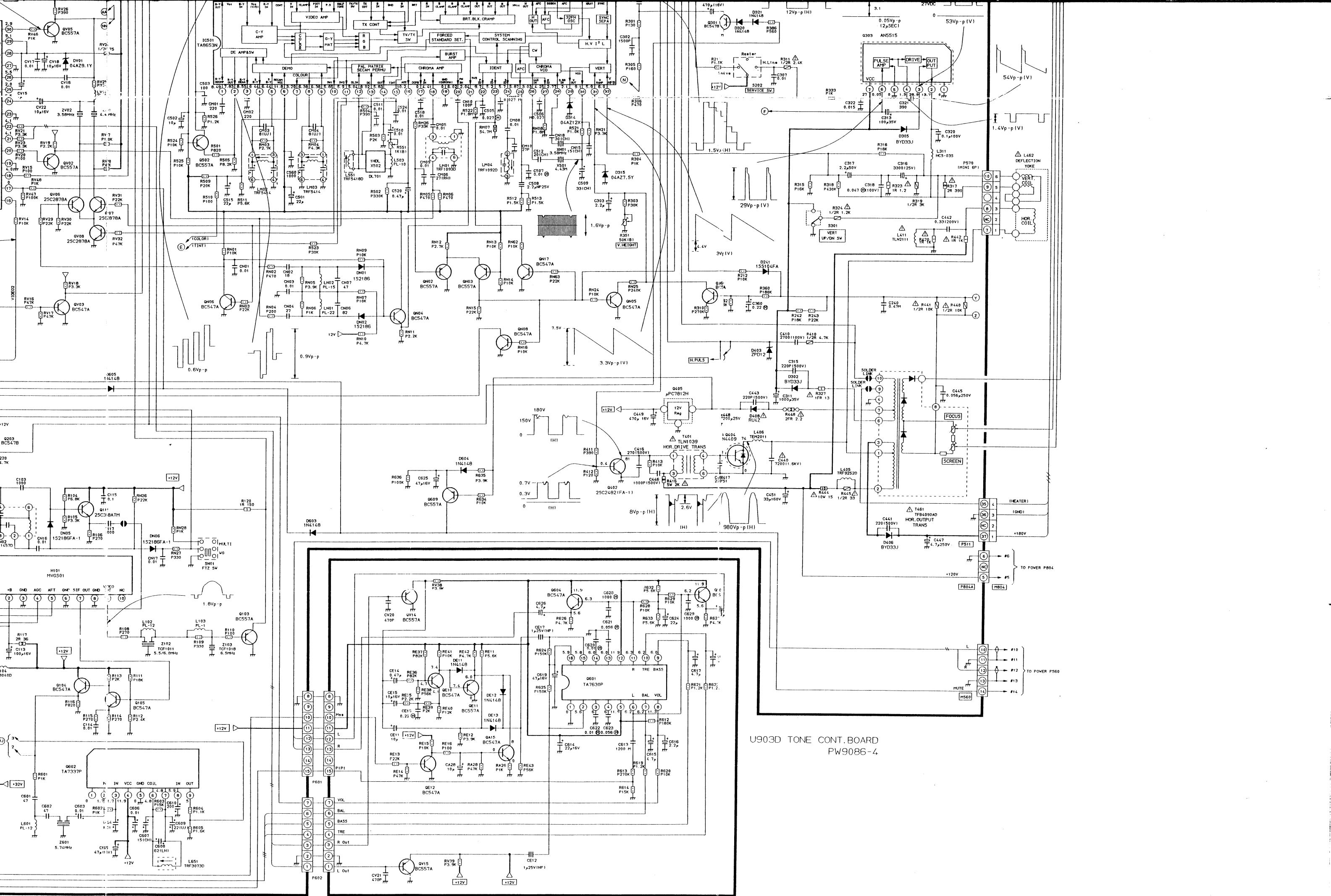
1 are expressed in

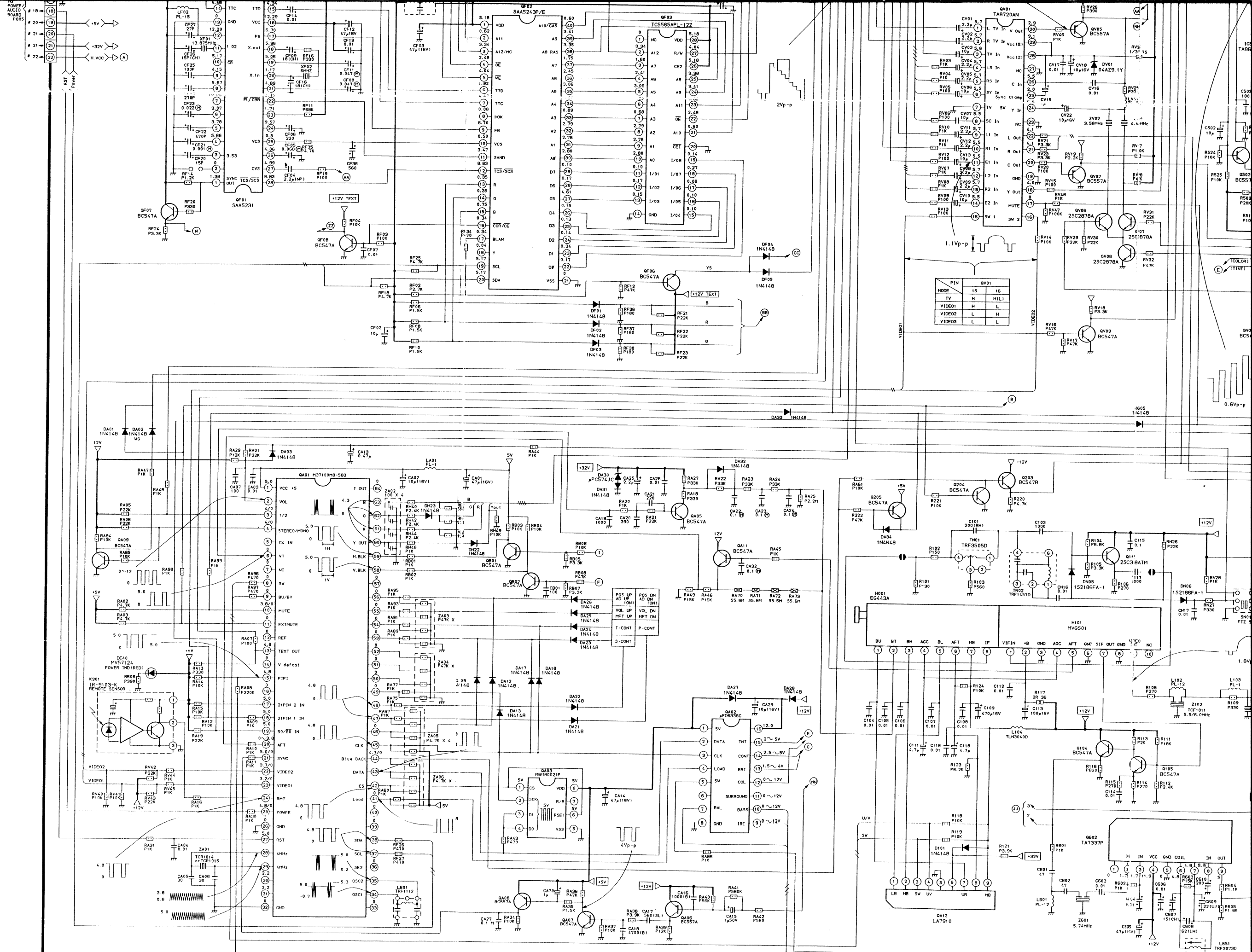
11	GREEN IN
12	NC
13	RED EARTH
14	NC
15	RED IN
16	RAPID BLANKING
17	VIDEO EARTH
18	RAPID BLK EARTH
19	VIDEO OUT
20	VIDEO IN
21	SHIELD EARTH

U902A MAIN BOARD PW9085

U903C CRT DRIVE BOARD PW9086-3







217D9D

SCHEMATIC DIAGRAM (2/2)

IMPORTANT SAFETY NOTICE

Component marked with the International Hazard Symbol must, if changed, be replaced by an approved type and must be mounted as the original. This will ensure that the safety standards adhered to during manufacture will be maintained following any servicing procedure.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (—) or ground lead of instruments should be connected to the ground marked (⊥) in the schematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⚡) on checking isolated circuit.
3. The voltage readings may vary as much as $\pm 20\%$.
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast, Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

NOTES:

1. This circuit diagram is subject to change without notice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH , and the values less than 1 in H.

GROUNDING SYMBOL

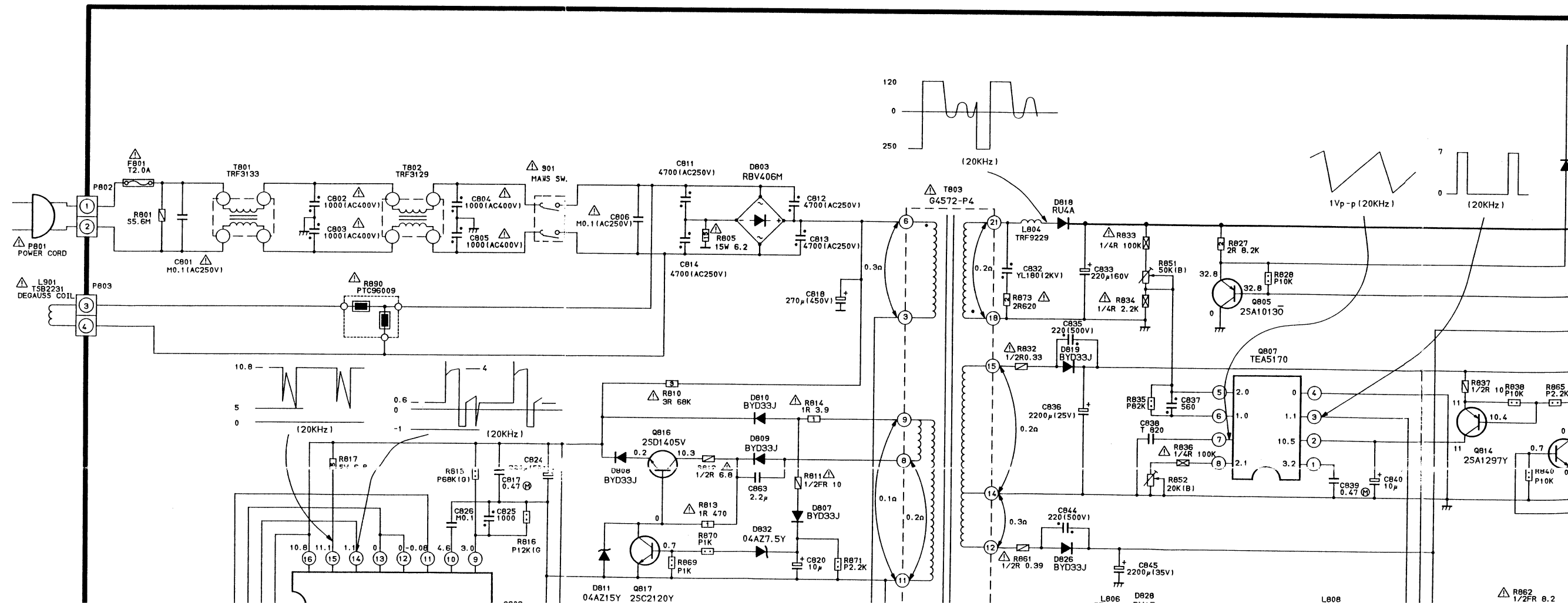
1. ⊥: Non isolated ground, ⚡: Isolated ground.

RESISTORS

Prefixed to values:

TYPE
Carbon Com
Oxide Metal F
Ins. Carbon F
Wire Wound
Cement covered
Fusible Res

U903A POWER/AUDIO BOARD PW9086-1



RESISTORS

Prefixed to values:

TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

TOLERANCE	MARK
± 1%	(F)
± 2%	(G)

Suffixes to VR values:

LAW	MARK
Linear	(B)
'C' Curve Characteristic	(C)

Rating Markings:

WATTAGE	MARK
1/6W	
1/4W	
1/2W	
1W	
2W	

WATTAGE	MARK
3W	
5W	
10W	
15W	
20W	
25W	

CAPACITORS

Rating Markings:

Type	Mark
Ceramic Disc 50V Only	
Electrolytic	
Electrolytic Non-Polar	
Variable Capacitor	
Other	

1 are expressed in
1 are expressed in

